Celanese

Celanese Acetate

Celco Plant
PO Box 1000
3520 Virginia Avenue
Narrows, VA 24124

December 17, 2012

Mr. Lewis J. Pillis, P.E.
Virginia Department of Environmental Quality
West Central Regional Office
3019 Peters Creek Road
Roanoke, VA 24019

Subject: VPDES Permit Renewal Application for VPDES Permits No. VA0000299

Dear Mr. Pillis:

Celanese Acetate, LLC (Celanese) is submitting to Virginia Department of Environmental Quality (VDEQ) one original and one copy of the application for renewal of Virginia Pollutant Discharge Elimination System (VPDES) permit VA0000299 for the Celanese facility located in Narrows, Virginia.

Utilities Outfall 001 (VA0092291) was previously permitted as Outfall 002 under permit VA0000299, but was bifurcated in the last permit application because Duke Energy Generation Services of Narrows LLC (DEGS) assumed ownership and operation of the outfall. In March 2011, Celanese regained ownership of this outfall and wishes to re-incorporate it into the facility's main permit (VA 0000299) as Outfall 002. Celanese submitted the VA0092291 permit application to VDEQ in August 2012, due to the earlier expiration date for VA0092291.

The attached application includes the following:

- Supporting VPDES Application Technical Memorandum
- Environmental Protection Agency (EPA) Form 1
- EPA Form 2C for Outfalls 001, 003, 005, and 006 (VA0000299, Form 2C)
- EPA Form 2F for Outfalls 501, 503, 008, 105, 107, and 111 (VA0000299, Form 2F)
- VPDES Permit Attachment A for Outfalls 001 and 003
- VDEQ Public Notice Billing Form
- Additional supplementary information including site drainage maps, material usage lists, summary of spills and leaks, cooling tower additives, and laboratory reports.

As requested by Celanese and approved by VDEQ, Form 2F was not submitted for Outfalls 001 and 003 because of the small contribution of stormwater to these outfalls.

Please note that Form 2F for Outfalls 005 and 502 are not included in this application, and Outfall 503 Form 2F is missing data. Celanese was not able to collect a sample for Outfall 005 due to the remote location of the outfall which limits the hours in which staff can safely mobilize to the location for sample collection. For Outfall 502, a significant rain event is required to generate storm flow, and such an event did not occur at a time when Celanese personnel were able to sample this outfall. Also the drainage area in active fly ash landfill has been recently changed such that Outfall 502 no longer receives appreciable storm flow from the landfill; this is described in detail in the permit application. Form 2F for Outfall 503 is missing data for BOD and color due to the laboratory exceeding the hold times on the samples. Outfall 503 also only generates flow during heavy rain events. When able, Celanese plans to collect samples to complete these three forms and will submit them to VDEQ as an addendum to this VPDES permit application.

Please also note that with this application Celanese requests the following:

- A reduction in monitoring for total residual chlorine monitoring on Outfall 001 to only when chlorination is occurring.
- A continuation in the use of Outfall 111 as the representative outfall for Outfalls 108, 109 and 110.
- A continuance of the permit's waiver for Organic Chemicals, Plastics, and Synthetic Fibers (OCPSF) parameters on Outfall 003. Additionally, a waiver is requested for chromium, copper and nickel; and an increase to total suspended solids (TSS) and biological oxygen demand (BOD) limits to reflect higher production flows is requested.
- A reduction in the frequency of Outfall 003's diffuser inspection report to every 2 years because of process improvements. Celanese also requests the inspection report deadline be extended to September 30th from July 10th, as a result of equipment limitations and safety concerns for periods of higher flows.
- Removal of Outfalls 007 and 503 from the permit. Outfall 007 no longer exists and internal Outfall 503 is not exposed to a significant amount of industrial activity to warrant individual monitoring requirements.
- Relocation of Outfall 502 to reflect new drainage paths in the active fly ash landfill.
- Reinstatement of Outfall 999 of VPDES Permit No. 0000299, which previously combined total heat rejection permit limits from Outfalls 001 and 002 at 19.4×10^9 British thermal units (BTUs).
- Removal of Groundwater Monitoring Plan requirements (Part 1, Condition 14) from the VPDES permit (this monitoring is now being done in coordination with EPA under the site's "RCRA Facility Lead" program).

In addition to the VPDES permit application, the facility's Best Management Practices (BMP) plan has been recently updated, and a copy is enclosed for VDEQ's records.

If you have any questions, please contact me at 540.921.6235 or by email at Kenneth.Hausle@celanese.com.

Sincerely,

Ken Hausle

Ken Hausle
Senior Environmental Engineer
Celanese Acetate, LLC

Attachments:

VPDES Permit Renewal Application
Best Management Practices Plan

Report

VPDES Permit VA 0000299 Renewal and Modification Application

Prepared for

Celanese Acetate, LLC

Narrows, Virginia

December 2012

CH2MHILL
1000 Abernathy Road, Suite 1600
Atlanta, GA, 30328

VPDES Permit VA 0000299 Renewal and Modification Application

TO: Ken Hausle/Celanese

FROM: Reid, Laura/CLT
Kristen Jenkins/CH2M HILL
Si Givens/CH2M HILL

DATE: December 10, 2012

PROJECT NUMBER: 435597

The Celanese Acetate, LLC (Celanese), in Narrows, Virginia, is covered by two Virginia Pollutant Discharge Elimination System (VPDES) permits, VA 0000299 and VA 0092291, which expire on June 27, 2013, and February 20, 2013, respectively. Celanese is requesting that Utilities Outfall 001, permitted under VA0092291, be incorporated into VPDES Permit No. VA 0000299 as Outfall 002, as was done in previous permits. This outfall was bifurcated into a separate permit in the 2007 VPDES permit application when Duke Energy Generation Services of Narrows LLC (DEGS) assumed ownership and operation of the outfall. In March 2011, in an administrative permit change, VDEQ returned ownership of this outfall to Celanese, who wishes to re-incorporate it into VPDES Permit No. VA 0000299. Due to its earlier expiration date, the renewal application for VA0092291 was submitted in August 2012.

Celanese requests to extend authorization to discharge for Permit VA 0000299 and is submitting this permit application. The permit application includes this technical memorandum (TM) along with the following attachments:

- Appendix A: Form 1
- Appendix B: Form 2C for Outfall 001, 003, 005, 006
- Appendix C: Form 2F for Outfall 005, 501, 502, 503, 008, 105, 107, and 111 Form 2F
- Appendix D: Attachment A for Outfall 001 and 003
- Appendix E: Toxicity Testing Data
- Appendix F: Site Drainage Map(s)
- Appendix G: List of Materials Potentially Exposed to Storm Water Runoff
- Appendix H: List of Significant Spills and Leaks
- Appendix I: Public Notice Billing Form
- Appendix J: Laboratory Reports
- Appendix K: List of Potential Cooling Tower Additives

General Information

Facility

The Celanese facility is located on the south side of U.S. Highway 460 in Narrows, Virginia, and adjacent to the New River. Celanese is engaged primarily in the manufacturing of acetate flake and cellulose acetate fibers under the Standard Industrial Classification (SIC) Codes of 2821 (Cellulose Acetate Resin), 2823 (Cellulose Acetate Fiber), 2869 (Acetic Anhydride), 3471 (Electroplating), and 4911 (Power Plant Operation). Note that the North American Industry Classification System (NAICS or SIC) codes are as follows: 325221 (2823), 325211 (2821), 325199 (2869), 221112(4911), and 332813 (3471). Celanese is subject to effluent limit guidelines as described in *Organic Chemicals, Plastics, and Synthetic Fibers (OCPSF)* located in 40 *Code of Federal Regulations* (CFR) 414.

Celanese generates wastewater and storm water from manufacturing/process operations, utility operations (non-contact cooling water, cooling water blow down, boiler blow down, steam, and heating, ventilation, and air conditioning [HVAC] condensate), and other miscellaneous sources. Leachate is generated from an onsite landfill operation. Sanitary wastewater from employees is also generated at the facility.

Groundwater Monitoring

Currently, Part I Condition 14 of VPDES Permit No. VA 0000291 incorporates a site groundwater monitoring plan approved on February 4, 2002 (*Flyash Groundwater Monitoring Assessment Ponds 1, 2, 4 – Post-closure Plan*). Since this time, a site-wide multi-media sampling program has been implemented with the U.S. Environmental Protection Agency (EPA), guided by the RCRA Facility Lead Program, which includes groundwater and surface water monitoring around the Fly Ash Ponds, including downgradient areas. Given that the RCRA program provides a vehicle to assess potential environmental impacts associated with the Fly Ash Ponds, it is requested that Condition 14 be removed and VDEQ discontinue Fly Ash Pond monitoring under the VPDES permit, allowing EPA to take the lead on potential contamination associated with Ponds 1, 2 and 4.

Outfall Descriptions

The facility has 11 permitted outfalls and 5 internal outfalls. Each of these outfalls is discussed in the subsequent sections, which detail the source water, treatment, and permit limits for each outfall.

Outfall 001

Outfall 001 primarily consists of non-contact cooling water, cooling tower blow-down, steam condensate, HVAC condensate, and general storm water runoff. Blowdown from several cooling towers, steam condensate, storm water from the manufacturing area, and cooling water all discharge to Outfall 001. Well water comprises less than 4 percent of the total flow, with the remainder being river water. Facility personnel estimate that approximately 100 outdoor storm drains exist in the facility, with most draining to Outfall 001. However, several outdoor storm drains are routed to the wastewater treatment plant (WWTP).

Chlorination of intake water and the once-through cooling system, to kill Asian clams, takes place two times a year for several weeks at a time, usually in early summer and late fall. The process water intake screen and the strainer backwash can be routed through Outfall 006 directly back to the New River or to Outfall 001. When chlorination occurs, the flow is always routed to Outfall 001 and de-chlorination of the outfall using ammonium bisulfite is provided prior to the discharge via Outfall 001 to the New River.

In snow or icy weather, de-icing salt is spread over paved surfaces to reduce slip hazards. A housekeeping contractor and/or operations personnel are responsible for sweeping outdoor areas where materials may enter drains. In addition, filter guards are utilized in selected drains near solids handling areas.

Limits Development for Outfalls 001

A completed VPDES Industrial Discharge Permit Application (EPA Form 2C and Attachment A) is presented in Appendix B and Appendix D, respectively, for Outfall 001. Attachment A is being submitted in accordance with the requirements of the current VPDES permit. This section documents development of the requested permit change for combining the heat rejection for both Outfall 001 and Utilities Outfall 001 (VA0092291), and reduced total residual chlorine monitoring. This outfall is subject to technology based limits for steam and electric power generators.

Heat Rejection Limit (Outfall 999)

Prior to the latest permit, VA 0000299 Outfall 001 and VA 0092291 Utilities Outfall 001 had a joint effluent heat rejection limitation of 19.4×10^9 British thermal units (BTUs). Compliance was monitored as Outfall 999 until it was removed from the permit when Utilities Outfall 001 was split from the main permit. Under the current permits, the

heat rejection limits were 19.0×10^9 BTUs for Outfall 001 (VA 0000299) and 0.4×10^9 BTUs for Utilities Outfall 001 (VA 0092291).

With this application, Celanese requests that VDEQ reinstate Outfall 999 of VPDES Permit No. 0000299, which limited the total heat rejected from Outfall 001 and Outfall 002 to 19.4×10^9 BTUs.

Total Residual Chlorine (Outfall 001)

Total residual chlorine (TRC) is currently monitored daily. When clam chlorinating, the facility uses ammonium bisulfite for de-chlorination. There have been four detections of TRC in the effluent in the previous 3 years for the period of June 2009 to June 2012. All the TRC detections occurred in January 2012 under atypical operating conditions and the values were below the quantification limit (QL) of 100 micrograms per liter (µg/L). During this time period, the plant was shut down, and Outfall 001 was experiencing minimal flows. Thus, the presence of chlorine detected during this time was likely influenced by residual chlorine in potable water draining to the outfall.

Even when including these detected values, a 3-year, long-term average is 0.40 µg/L TRC. Therefore, Celanese requests that the total chlorine monitoring requirement be reduced to daily monitoring only when clam chlorinating.

Internal Storm Water Outfalls 105 and 107

Internal Outfalls 105 and 107 are storm drains located in the coal and fly ash handling area that discharge to Outfall 001 upstream of the monitoring point. Both are subject to special permit conditions that require an annual monitoring of storm water discharges for flow and total suspended solids (TSS). The special permit condition requires that if the TSS in the storm water ever exceeds 100 milligrams per liter (mg/L), the facility must improve best management practices (BMPs) to reduce solids from going into the outfalls. To manage the solids from these areas, both storm drains were equipped with sediment filtration systems, however due to poor performance of these systems, the drains are kept covered to prevent discharges. VPDES Industrial Discharge Permit Application (EPA Form 2F) is presented in Appendix C for Outfalls 105 and 107, including the TSS monitoring from the last discharge to these outfalls that was collected in 2008.

To prevent ponding issues currently experienced due to these drains being covered, an engineering evaluation to make recommendations for routing of storm water from these outfalls to the ash ponds is planned to be completed by the end of 2012. This project would increase the area of storm water run-off to the ash ponds by a small amount, approximately less than 1 acre. Once recommendations from the evaluation and cost estimates are completed, a decision will be made concerning the plans for these drains. It is worth noting that the site expects to receive an air permit for new gas-fired boilers by the end of 2012 or early 2013. Once the new gas-fired boilers are operational (expected to be sometime in 2015), use of coal at the facility will be permanently discontinued.

Storm Water Outfalls 108, 109, 110 and 111

During the last VPDES permit application, it was noted that storm water runoff was entering Outfall 001 downstream of the monitoring point. As a result, storm water outfalls 108, 109, 110 and 111 were created. The outfalls discharge small amounts of storm water flow from a portion of the WWTP process area along either side of the bridge that crosses over Outfall 001 connecting the sludge area to the larger WWTP process area. The storm water flows through the outfalls and enters Outfall 001 through the grassed area between the road and the river.

The road on the WWTP side of the bridge receives minimal flow, as does the left side of the road coming from the sludge area which has no curb (Outfalls 108, 109, and 110). The right side of the road coming from the sludge area does have a curb that directs storm water toward Outfall 001 through Outfall 111. As part of this VPDES permit application, VDEQ accepted Celanese's request that Outfall 111 serve as the representative outfall because it is believed to receive the majority of the solid bearing storm water runoff from the drainage area, and therefore should result in "worst case" impacts for the similar outfalls. A completed VPDES Industrial Discharge Permit Application (EPA Form 2F) is presented in Appendix C for Outfall 111.

These outfalls are subject to special permit conditions that require an annual monitoring of storm water discharges for flow and TSS. The special permit condition requires that if the TSS in the storm water ever exceeds 100 mg/L, the facility must improve BMPs to reduce solids from going into outfall. To manage the solids from these areas, Celanese employs a housekeeping contractor to sweep outdoor areas where material may enter drains. In addition, different types of filter bags and/or wattles are being evaluated to aid in filtering sediment at these discharge points.

Outfall 003

The Celco facility produces cellulose acetate flake and cellulose acetate tow, which are primarily used in the manufacturing of cigarette filters. The manufacturing facility operates 24 hours a day, 7 days a week. Streams directed to the facility's WWTP include process wastewater, various process vessels, periodic cleanings, empty drum cleaning, and miscellaneous maintenance activities. At the WWTP, they are treated before being discharged to Outfall 003. The process wastewater contributes over 90 percent of the total flow in Outfall 003. In addition to the process wastewater, the WWTP also receives sanitary wastewater, cooling tower blow down, storm water, landfill leachate, and water from hydro-testing tanks. Storm water includes areas of industrial activity such as process chemical storage tank dike areas, such as the "CC Tank Farm." Approximately 5 acres of the plant site drain to Outfall 003 treatment works. Sanitary wastewater receives primary treatment and chlorine disinfection prior to mixing with process wastewater and further biological treatment in the WWTP.

Wastewater Treatment

Celanese's WWTP consists of solids screening, equalization, diversion, activated sludge biological treatment, clarification/sedimentation, media filtration, chlorine disinfection of sanitary wastewater, and sludge dewatering. A portion of the dewatered sludge is disposed in an onsite landfill and a portion is transported off-site as a raw material to a commercial composting facility. Treated process wastewater is discharged to the New River via a multiport diffuser (Outfall 003).

Limits Development for Outfall 003

A completed VPDES Industrial Discharge Permit Application (EPA Form 2C and Attachment A) is presented in Appendix B and Appendix D, respectively, for Outfall 003. Attachment A is being submitted in accordance with the requirements of the current VPDES permit. The paragraphs below document development of the requested permit change for increasing the TSS and BOD limits, and continued waiver for monitoring of most organic compounds, plastics, and synthetic fibers (OCPSF), as well as the request to waiver chromium, copper and nickel. This outfall is subject to both OCPSF and secondary treatment limit guidelines.

TSS and BOD

As described in the outfall description, Outfall 003 receives process wastewater, sanitary wastewater, and storm water, which are captured and treated by the facility's WWTP. With respect to the OCPSF federal effluent guidelines under 40 CFR 414, the process wastewater falls under three subparts: thermoplastic resins (Subpart D), other fibers (Subpart C), and commodity organic chemicals (Subpart F). The wastewater flows associated with each subpart are shown in Table 1, along with the current TSS and BOD limits based on the regulatory guidance (minor discrepancies between these calculated values and the actual permit limits are likely due to rounding differences). Since the last permit application, the facility has seen increased wastewater flow rate for the associated process streams. Based on this, proposed TSS and BOD limits have been estimated and are presented in Table 2.

OCPSF Priority Pollutants

Additional effluent guidelines established by the OCPSF regulations include organic priority pollutants and limits, as well as monitoring for metals. Because of a history of non-detection, including the data presented in Form 2C, Celanese currently has a waiver for all OCPSF parameters except for chromium, copper, and nickel, which are monitored quarterly. In the last 3 years, there have been no detections for chromium or copper at or above

100 µg/L, and very low detections of nickel. The long-term average concentration of nickel is 129 µg/L (including non-detections at the reporting level), which is 7.6 percent of the monthly average permit limit of 1,690 µg/L. A reasonable potential analysis (RPA), following EPA procedure, for nickel indicates a maximum effluent concentration of 332 µg/L, far below the current monthly average of 1,690 µg/L. Thus, Celanese is requesting a continuance of the current permit's waiver for monitoring for OCPSF parameters, and requests that chromium and copper and nickel monitoring be waived as well. Table 3 shows current and proposed OCPSF limits. Table 4 outlines the method used for the RPA for nickel.

Diffuser Inspections

Under the current permit, Celanese annually inspects the diffuser for Outfall 003 and submits the report to VDEQ. To date, no inspection has shown a decrease in performance of the diffuser, although solids have been noted in the pipe. Generally, maintenance is driven by sediment accumulation in the piping from the surrounding river sediment. Since this requirement was added, no inspection has reported a decrease in the diffuser function, although the line is typically cleaned during the inspection for any solid accumulating in the piping. In October 2010, the diffuser was outfitted with Tideflex diffuser valves to reduce sediment accumulation in the pipe. The 2012 findings reported no significant solid accumulation. Since solid accumulation is the main driver for annual inspections, it is requested that the inspections be reduced to a bi-annual basis due to the fact the required maintenance frequency is reduced because of the new valves.

The deadline for the inspection report is July 10th of each year. Celanese wishes to request the report deadline be moved to September 30th based on the past performance and equipment upgrades outlined above. The current deadline limits Celanese to inspecting the diffuser during late spring and early summer months at a time when the New River typically experiences larger flows. The higher water levels frequently exceed the hydraulic capacity of the equipment used in the inspection, and the higher flows are deemed unsafe for divers to enter the river and assist with cleaning. Moving the deadline to September would allow Celanese to schedule inspections for periods of lower flow to avoid these issues, especially in years when river levels are higher than usual.

TABLE 1
Development of Current TSS and BOD Limits for Outfall 003
Celanese Acetate, LLC, Narrows, Virginia

Wastestream	Effluent Guideline Basis	Parameter	Effluent Guideline		Mass-based Limit[a]	
			Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
Cellulose Acetate Fiber	Best Professional Judgment (BPJ) Guided by	Flow[c]	0.405 mgd	---	---	---
	OCPSF/Subpart C - Other Fibers	BOD	18 mg/L	48 mg/L	27.6 kg/d	73.6 kg/d
	(40 CFR 414 Subpart C)	TSS	36 mg/L	115 mg/L	55.2 kg/d	176.3 kg/d
Cellulose Acetate Resin	Best Professional Judgment (BPJ) Guided by	Flow[c]	0.510 mgd	---	---	---
	OCPSF/Subpart D - Thermoplastic Resins	BOD	24 mg/L	64 mg/L	46.3 kg/d	123.5 kg/d
	(40 CFR 414 Subpart D)	TSS	40 mg/L	130 mg/L	77.2 kg/d	250.9 kg/d
Acetic Anhydride	Best Professional Judgment (BPJ) Guided by	Flow[c]	0.585 mgd	---	---	---
	OCPSF/Subpart F - Commodity Organic Chemicals	BOD	30 mg/L	80 mg/L	66.4 kg/d	177.1 kg/d
	(40 CFR 414 Subpart F)	TSS	46 mg/L	149 mg/L	101.9 kg/d	329.9 kg/d
Cooling Tower Blowdown		Flow[c]	0.024 mgd	---	---	---
		BOD[b]	mg/L	mg/L	0.0 kg/d	0.0 kg/d
		TSS[b]	mg/L	mg/L	0.0 kg/d	0.0 kg/d
Landfill Leachate		Flow[c]	0.009 mgd	---	---	---
		BOD[b]	mg/L	mg/L	0.0 kg/d	0.0 kg/d
		TSS[b]	mg/L	mg/L	0.0 kg/d	0.0 kg/d
Process Storm Water		Flow[c]	0.013 mgd	---	---	---
		BOD[b]	mg/L	mg/L	0.0 kg/d	0.0 kg/d
		TSS[b]	mg/L	mg/L	0.0 kg/d	0.0 kg/d
Domestic Wastewater (Sanitary)	Secondary Treatment Regulation	Flow[d]	0.053 mgd	---	---	---
		BOD	30 mg/L	45 mg/L	6.0 kg/d	8.9 kg/d
		TSS	30 mg/L	45 mg/L	6.0 kg/d	8.9 kg/d
Combined Wastewater[b]	---	Flow	1.599 mgd	---	---	---
		BOD	NL mg/L	NL mg/L	146.3 kg/d	383.2 kg/d
		TSS	NL mg/L	NL mg/L	240.2 kg/d	766.1 kg/d

[a] Mass-based limits = Flow x Effluent Guideline × 3.785

[b] The state does not give a BOD or TSS allocation for these streams.

[c] Flow based on projection factors developed based on historical data. The total flow associated with OCPSF wastestreams were 1.5 MGD (*2008 Fact Sheet*) and the production fractions of 27%, 34%, and 39%, respectively.

[d] Flow based on a calculated usage of 35 gpcd and a maximum of 1,500 employees. Actual sanitary flow is much higher due to receiving wash water from some buildings/process area floor drains.

TABLE 2
Development of Proposed TSS and BOD Limits for Outfall 003
Celanese Acetate, LLC, Narrows, Virginia

Wastestream	Effluent Guideline Basis	Parameter	Effluent Guideline		Mass-based Limit(a)	
			Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
Cellulose Acetate Fiber	Best Professional Judgment (BPJ) Guided by	Flow[c]	0.477 mgd	---	---	---
	OCPSF/Subpart C - Other Fibers	BOD	18 mg/L	48 mg/L	32.5 kg/d	86.6 kg/d
	(40 CFR 414 Subpart C)	TSS	36 mg/L	115 mg/L	64.9 kg/d	207.4 kg/d
Cellulose Acetate Resin	Best Professional Judgment (BPJ) Guided by	Flow[c]	0.527 mgd	---	---	---
	OCPSF/Subpart D - Thermoplastic Resins	BOD	24 mg/L	64 mg/L	47.9 kg/d	127.7 kg/d
	(40 CFR 414 Subpart D)	TSS	40 mg/L	130 mg/L	79.8 kg/d	259.4 kg/d
Acetic Anhydride	Best Professional Judgment (BPJ) Guided by	Flow[c]	0.686 mgd	---	---	---
	OCPSF/Subpart F - Commodity Organic Chemicals	BOD	30 mg/L	80 mg/L	77.9 kg/d	207.8 kg/d
	(40 CFR 414 Subpart F)	TSS	46 mg/L	149 mg/L	119.5 kg/d	387.0 kg/d
Cooling Tower Blowdown		Flow[c]	0.024 mgd	---	---	---
		BOD[b]	mg/L	mg/L	0.0 kg/d	0.0 kg/d
		TSS[b]	mg/L	mg/L	0.0 kg/d	0.0 kg/d
Landfill Leachate		Flow[c]	0.009 mgd	---	---	---
		BOD[b]	mg/L	mg/L	0.0 kg/d	0.0 kg/d
		TSS[b]	mg/L	mg/L	0.0 kg/d	0.0 kg/d
Process Storm Water		Flow[c]	0.013 mgd	---	---	---
		BOD[b]	mg/L	mg/L	0.0 kg/d	0.0 kg/d
		TSS[b]	mg/L	mg/L	0.0 kg/d	0.0 kg/d
Domestic Wastewater (Sanitary)	Secondary Treatment Regulation	Flow[d]	0.053 mgd	---	---	---
		BOD	30 mg/L	45 mg/L	6.0 kg/d	8.9 kg/d
		TSS	30 mg/L	45 mg/L	6.0 kg/d	8.9 kg/d
Combined Wastewater[b]	---	Flow	1.789 mgd	---	---	---
		BOD	NL mg/L	NL mg/L	164.2 kg/d	431.0 kg/d
		TSS	NL mg/L	NL mg/L	270.2 kg/d	862.8 kg/d

[a] Mass-based limits = Flow x Effluent Guideline × 3.785

[b] The state does not give a BOD or TSS allocation for these streams.

[c] Flow based on projection factors developed based on historical data. The total flow associated with OCPSF wastestreams were 1.69 MGD (long term average from February 2009 through February 2012) and the production fractions of 28.2%, 31.2%, and 40.6% (based on production from 2009-2011), respectively.

[d] Flow based on a calculated usage of 35 gpcd and a maximum of 1,500 employees. Actual sanitary flow is much higher due to receiving wash water from some buildings/process area floor drains.

TABLE 3
Development of OCPSF Limits for Outfall 003
Celanese Acetate, LLC, Narrows, Virginia

	OCPSF Effluent Guideline		Current Permit Limits			Proposed Permit Limits		
	Daily Maximum (µg/L)	Monthly Average (µg/L)	Daily Maximum (g/d)	Monthly Average (g/d)	Monitoring Status	Daily Maximum (g/d)	Monthly Average (g/d)	Requested Monitoring Status
Flow Basis (mgd)				1.500				1.690
Acenaphthene	59	22	335	125	waived	377	141	waived
Acenaphthylene	59	22	335	125	waived	377	141	waived
Acrylonitrile	242	96	1,374	545	waived	1,548	614	waived
Anthracene	59	22	335	125	waived	377	141	waived
Benzene	136	37	772	210	waived	870	237	Waived
Benzo(a)anthracene	59	22	335	125	waived	377	141	Waived
3,4-Benzoflouranthene	61	23	346	131	waived	390	147	Waived
Benzo(k)flouranthene	59	22	335	125	waived	377	141	Waived
Benzo(a)pyrene	61	23	346	131	waived	390	147	Waived
Bis(2-ethylhexyl)phthalate	279	103	1,584	585	waived	1,785	659	Waived
Carbon Tetrachloride	38	18	216	102	waived	243	115	Waived
Chlorobenzene	28	15	159	85	waived	179	96	Waived
Chloroethane	268	104	1,522	590	waived	1,714	665	Waived
Chloroform	46	21	261	119	waived	294	134	Waived
2-Chlorophenol	98	31	556	176	waived	627	198	Waived
Chrysene	59	22	335	125	waived	377	141	Waived
Di-n-butyl phthalate	57	27	324	153	waived	365	173	Waived
1,2-Dichlorobenzene	163	77	925	437	waived	1,043	493	Waived
1,3-Dichlorobenzene	44	31	250	176	waived	281	198	Waived
1,4-Dichlorobenzene	28	15	159	85	waived	179	96	waived
1,1-Dichloroethane	59	22	335	125	waived	377	141	waived

TABLE 3
Development of OCPSF Limits for Outfall 003
Celanese Acetate, LLC, Narrows, Virginia

	OCPSF Effluent Guideline		Current Permit Limits			Proposed Permit Limits		
	Daily Maximum (µg/L)	Monthly Average (µg/L)	Daily Maximum (g/d)	Monthly Average (g/d)	Monitoring Status	Daily Maximum (g/d)	Monthly Average (g/d)	Requested Monitoring Status
1,2-Dichloroethane	211	68	1,198	386	waived	1,350	435	waived
1,1-Dichloroethylene	25	16	142	91	waived	160	102	waived
1,2-trans-Dichloroethylene	54	21	307	119	waived	345	134	waived
2,4-Dichlorophenol	112	39	636	221	waived	716	249	waived
1,2-Dichloropropane	230	153	1,306	869	waived	1,471	979	waived
c-1,3-Dichloropropylene	44	29	250	165	waived	281	186	waived
Diethyl phthalate	203	81	1,153	460	waived	1,299	518	waived
2,4-Dimethylphenol	36	18	204	102	waived	230	115	waived
Dimethyl phthalate	47	19	267	108	waived	301	122	waived
4,6-Dinitro-o-cresol	277	78	1,573	443	waived	1,772	499	waived
2,4-Dinitrophenol	123	71	698	403	waived	787	454	waived
2,4-Dinitrotoluene	285	113	1,618	642	waived	1,823	723	waived
2,6-Dinitrotoluene	641	255	3,639	1,448	waived	4,100	1,631	waived
Ethylbenzene	108	32	613	182	waived	691	205	waived
Flouranthene	68	25	386	142	waived	435	160	waived
Flourene	59	22	335	125	waived	377	141	waived
Hexachlorobenzene	28	15	159	85	waived	179	96	waived
Hexachlorobutadiene	49	20	278	114	waived	313	128	waived
Hexachloroethane	54	21	307	119	waived	345	134	waived
Methyl Chloride	190	86	1,079	488	waived	1,215	550	waived
Methylene Chloride	89	40	505	227	waived	569	256	waived
Naphthalene	59	22	335	125	waived	377	141	waived
Nitrobenzene	68	27	386	153	waived	435	173	waived

TABLE 3
Development of OCPSF Limits for Outfall 003
Celanese Acetate, LLC, Narrows, Virginia

	OCPSF Effluent Guideline		Current Permit Limits			Proposed Permit Limits		
	Daily Maximum (µg/L)	Monthly Average (µg/L)	Daily Maximum (g/d)	Monthly Average (g/d)	Monitoring Status	Daily Maximum (g/d)	Monthly Average (g/d)	Requested Monitoring Status
2-Nitrophenol	69	41	392	233	waived	441	262	waived
4-Nitrophenol	124	72	704	409	waived	793	461	waived
Phenanthrene	59	22	335	125	waived	377	141	waived
Phenol	26	15	148	85	waived	166	96	waived
Pyrene	67	25	380	142	waived	429	160	waived
Tetrachloroethylene	56	22	318	125	waived	358	141	waived
Toluene	80	26	454	148	waived	512	166	waived
1,2,4,-Trichlorobenzene	140	68	795	386	waived	896	435	waived
1,1,1-Trichloroethane	54	21	307	119	waived	345	134	waived
1,1,2-Trichloroethane	54	21	307	119	waived	345	134	waived
Trichloroethylene	54	21	307	119	waived	345	134	waived
Vinyl Chloride	268	104	1,522	590	waived	1,714	665	waived
Total Chromium	2,770	1,110	15,700	6,300	1/3 months	17,700	7,100	waived
Total Copper	3,380	1,450	19,200	8,230	1/3 months	21,600	9,280	waived
Total Cyanide	1,200	420	6,800	2,380	waived	7,700	2,690	waived
Total Lead	690	320	3,900	1,820	waived	4,400	2,050	waived
Total Nickel	3,980	1,690	22,600	9,600	1/3 months	25,500	10,800	waived
Total Zinc	2,610	1,050	14,800	5,960	waived	16,700	6,720	waived

TABLE 4
Risk Potential Analysis for Nickel on Outfall 003
Celanese Acetate, LLC, Narrows, Virginia

Initial Data Set		
Date	**Result (ug/L)**	**Detect - 0 Non-detect - 1**
Jul-09	174	0
Nov-09	50	1
Mar-10	50	1
May-10	111	0
Jul-10	124	0
Nov-10	142	0
Feb-11	143	0
May-11	144	0
Aug-11	100	0
Nov-11	152	0
Feb-12	156	0
Apr-12	50	1

RPA ANALYSIS FOR Nickel		
Calculation	**Result**	**Notes**
Number of samples in the data set, N =	12	
Maximum data point, Max =	174	
Minimum data point, Min =	50	
Mean data point, μ =	116.3	
Standard deviation of data set =	44.6	
Coefficient of variation, CV =	0.38	
Confidence level =	0.99	
The percentile represented by the highest concentration in the dataset that has "n" number of samples, ρn =	0.68	
σ2 =	0.14	
σ =	0.37	
Number of nondetect samples, n =	3	
z99 =	2.2	
C99 =	2.1	=exp(z99*σ - 0.5*σ2)
z-score =	0.5	
Cρn =	1.1	=exp(z-score*σ - 0.5*σ2)
C99 / Cρn =	1.9	
maximum effluent concentration (ug/L) =	332	
Average flow (cfs) =	3.4	
Maximum flow (cfs) =	4.0	

	Flow (cfs)	**Dilution Factor**
7Q10 =	0	---
MZ =	0	1
ZID =	0	1

TABLE 4
Risk Potential Analysis for Nickel on Outfall 003
Celanese Acetate, LLC, Narrows, Virginia

	MZ	ZID
Effluent discharge, Qe (average flow) =	3.4	3.4
Effluent concentration of pollutant, Ce =	332	332
Receiving stream available for mixing, Qs* =	0.0	0.0
Upstream concentration of pollutant, Cs =	0.0	0.0
Receiving water concentration, RWC =	332	332
	MZ	**ZID**
Effluent discharge, Qe (maximum flow) =	4.0	4.0
Effluent concentration of pollutant, Ce =	332	332
Receiving stream available for mixing, Qs* =	0.0	0.0
Upstream concentration of pollutant, Cs =	0.0	0.0
Receiving water concentration (ug/L) , RWC =	332	332

Outfall 005

Storm water runoff from the landfill areas discharge to Outfalls 008 and 005. Outfall 005 has both dry weather and wet weather flow. , Spring water which flows into an abandoned underground storm water conveyance pipe under the fly ash landfill, discharges to Outfall 005. This discharge contains trace levels of ammonia. This landfill primarily contains fly ash; however, prior to 1995 (approximate), process sludge from the WWTP was disposed of in the ash settling ponds and is therefore present in this fly ash landfill.

Limits Development for Outfall 005

A completed VPDES Industrial Discharge Permit Application (EPA Form 2C, EPA Form 2F) is presented in Appendix B and Appendix C, respectively for Outfall 005. Since this outfall contains dry weather flow with trace ammonia, the outfall is currently monitored for flow, ammonia, pH, and temperature on a quarterly basis. Celanese is requesting that the current permit conditions be maintained in the new permit. The outfall is subject to storm water monitoring for TSS, which is monitored at three internal outfalls, Outfalls 501, 502, and 503.

Internal Storm Water Outfalls 501, 502 and 503

Storm water discharged from Outfall 005 includes water from three internal outfalls, Outfalls 501, 502, and 503. The drainage area for Outfall 501 is the soil borrow area, while the fly ash landfill drains to Outfall 502, and the areas near the asbestos landfill drains to Outfall 503. A completed VPDES Industrial Discharge Permit Application (EPA Form 2F) is presented in Appendix C for Outfalls 501, 502, and 503. Since the last permit application, some changes have been made to the areas draining to Outfalls 502 and 503, including drainage modifications and industry activity exposure, respectively. Celanese is requesting changes to Outfalls 502 and 503 to reflect current operations, as described below.

The drainage areas in Outfall 502 have been altered in the last year, 2011-2012, changing the drainage contours such that Outfall 502 no longer receives appreciable storm flow from the active fly ash landfill. Increased use of the ash landfill has shifted activities to the southern part of the landfill. The active fly ash landfill now discharges storm water

towards a drain at the southeast side of the active landfill where it is proposed that internal Outfall 502 be relocated. From there, storm water is routed to the lower storm water retention pond, and into Outfall 005. The new flow path is shown on the site drainage maps located in Appendix F.

Outfall 503 collects runoff from areas near the asbestos landfill. The asbestos landfill is still active, but is only being used on rare occasions, approximately once or twice a year, and there are no plans to increase frequency of usage. In addition, the asbestos landfill is equipped with a leachate collection system that sends collected water to the wastewater treatment plant. The remaining area that drains into Outfall 503 is undisturbed and well vegetated. Over the last 3 years, the average TSS concentration is 60.5 mg/L with a maximum concentration of 128 mg/L. Since the area is rarely used , and the runoff will be collected in the leachate collection system, Celanese requests that Outfall 503 be removed from the permit and no further monitoring be required for this location.

All three outfalls are subject to special permit conditions that require an annual monitoring of storm water discharges for flow and TSS. Benchmark TSS levels are 100 mg/L for landfills. If TSS exceeds 100 mg/L, the facility must improve BMPs to reduce solids from going into the outfalls. To manage the solids from these areas, various erosion and sedimentation controls are used, including vegetation, terracing and grading to reduce angle of flow, sediment ponds and traps, riprap /lined ditches, check dams, graveled roadways, and silt fencing.

Outfall 006

Outfall 006 consists only of the process water intake screen backwash, strainer backwash, and trash rack sprays from the process water river water intake structure on the New River. The intake screen and the strainer backwash can be routed through Outfall 006 directly back to the New River or to Outfall 001, and then to the New River. The trash rack sprays are routed directly back to the New River at Outfall 006.

A completed VPDES Industrial Discharge Permit Application (EPA Form 2C) is presented in Appendix B for Outfall 006. Celanese requests continued authorization to discharge through this outfall.

Outfall 007

Outfall 007 consisted only of river water from an automatic sampler located on the process water river water intake on the New River. The once-through water can be routed through Outfall 007 directly back to the New River or to Outfall 001, and then to the New River. However, the composite sampler has not been in use for some time and Celanese has no plans to use it in the future. As such, Celanese requests that VDEQ remove this outfall from the VPDES permit. Since it is not in use, no forms (e.g., Form 2C) were prepared for this outfall.

Outfall 008

Two storm water branches from the inactive landfill areas drain to Outfall 008. One branch drains storm water from a portion of the industrial waste landfill 207 and some natural undisturbed areas. The second storm water branch, also a wet weather stream, drains the closed process sludge landfill and surrounding natural areas. Runoff from the landfill crosses under Highway 460 and combines with storm water from the Celanese contractor parking lot and closed Pond 4 area, finally discharging as Outfall 008 into a culvert that combines with flow from the former ash Pond 2 and Utilities Outfall 001 (VA0092291). The contractor parking lot is currently being expanded and is expected to be completed by the end of 2012. This will increase the impervious area by 2.9 acres.

Limits Development for Outfall 008

A completed VPDES Industrial Discharge Permit Application (EPA Form 2F) is presented in Appendix C for Outfall 008. The outfall is subject to storm water annual monitoring of the flow and TSS. Benchmark TSS levels are 100 milligrams per liter (mg/L) for landfills. If TSS exceeds 100 mg/L, the facility must improve BMPs to reduce solids from going into outfall. Celanese has used silt fencing, storm wattles, paving projects, general housekeeping and ditch maintenance/cleaning to keep the areas that drain to Outfall 008 free of debris and solids.

Appendix A
Form 1

Please print or type in the unshaded areas only.

Form Approved. OMB No. 2040-0086.

FORM 1 GENERAL

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER

S		T/A	C
F	VAD005007679		D
1	2 — 13	14	15

LABEL ITEMS

- I. EPA I.D. NUMBER
- III. FACILITY NAME
- V. FACILITY MAILING ADDRESS
- VI. FACILITY LOCATION

PLEASE PLACE LABEL IN THIS SPACE

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of **bold-faced terms**.

SPECIFIC QUESTIONS	Mark "X" YES	NO	FORM ATTACHED	SPECIFIC QUESTIONS	Mark "X" YES	NO	FORM ATTACHED
A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.**? (FORM 2A)		X		B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a **discharge** to **waters of the U.S.**? (FORM 2B)		X	
	16	17	18		19	20	21
C. Is this a facility which currently results in **discharges** to **waters of the U.S.** other than those described in A or B above? (FORM 2C)	X		2C,2F	D. Is this a proposed facility *(other than those described in A or B above)* which will result in a **discharge** to **waters of the U.S.**? (FORM 2D)		X	
	22	23	24		25	26	27
E. Does or will this facility treat, store, or dispose of **hazardous wastes**? (FORM 3)		X		F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
	28	29	30		31	32	33
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
	34	35	36		37	38	39
I. Is this facility a proposed **stationary source** which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed **stationary source** which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an **attainment area**? (FORM 5)		X	
	40	41	42		43	44	45

III. NAME OF FACILITY

C 1 SKIP: CELANESE ACETATE, LLC

15 | 16 – 29 | 30 — 69

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
C 2 HAUSLE KEN - SENIOR ENVIRONMENTAL ENGINEER	540 921 6235
15 — 16 — 45	46 — 48 | 49 — 51 | 52 — 55

V. FACILTY MAILING ADDRESS

A. STREET OR P.O. BOX

C 3 3520 VIRGINIA AVENUE

15 — 16 — 45

B. CITY OR TOWN	C. STATE	D. ZIP CODE
C 4 NARROWS	VA	24124
15 — 16 — 40	41 — 42	47 — 51

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER

C 5 3520 VIRGINIA AVENUE

15 — 16 — 45

B. COUNTY NAME

GILES

46 — 70

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE *(if known)*
C 6 NARROWS	VA	24124	
15 — 16 — 40	41 — 42	47 — 51	52 — 54

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

VII. SIC CODES *(4-digit, in order of priority)*

A. FIRST	B. SECOND
2821 *(specify)* Cellulose Acetate Resin	2823 *(specify)* Cellulose Acetate Fiber
C. THIRD	**D. FOURTH**
2869 *(specify)* Acetic Anhydride	3471 *(specify)* Electroplating

VIII. OPERATOR INFORMATION

A. NAME: CELANESE ACETATE, LLC

B. Is the name listed in Item VIII-A also the owner? ☑ YES ☐ NO

C. STATUS OF OPERATOR *(Enter the appropriate letter into the answer box: if "Other," specify.)*

F = FEDERAL
S = STATE
P = PRIVATE
M = PUBLIC *(other than federal or state)*
O = OTHER *(specify)*

P *(specify)*

D. PHONE *(area code & no.)*: A (540) 921-1111

E. STREET OR P.O. BOX: 3520 VIRGINIA AVENUE

F. CITY OR TOWN: NARROWS

G. STATE: VA

H. ZIP CODE: 24124

IX. INDIAN LAND

Is the facility located on Indian lands? ☐ YES ☑ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES *(Discharges to Surface Water)*	D. PSD *(Air Emissions from Proposed Sources)*
N VA0000299 & VA0092291	P NA
B. UIC *(Underground Injection of Fluids)*	**E. OTHER** *(specify)*
U NA	2 0 3 0 4 Air Permit *(specify)*
C. RCRA *(Hazardous Wastes)*	**E. OTHER** *(specify)*
R VAD005007679	207 & 550 Landfill Permits *(specify)*

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers, and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS *(provide a brief description)*

Primarily engaged in the manufacturing of acetate flake and cellulose acetate fibers.

The facility also owns and operates an on-site coal-fired power plant. The wastewater associated with the power plant is treated and discharged under a separate VPDES permit (VA0092291) through Utilities Outfall 001. This outfall was bifurcated into a separate permit in the 2007 VPDES permit application, when Duke Energy Generation Services of Narrows LLC assumed ownership and operation of the outfall. In March 2011, in an administration permit change, VDEQ returned ownership of this outfall to Celanese.

XIII. CERTIFICATION *(see instructions)*

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE *(type or print)*	B. SIGNATURE	C. DATE SIGNED
Kristina Geelmuyden Karlsson Site Director		12-17-2012

COMMENTS FOR OFFICIAL USE ONLY

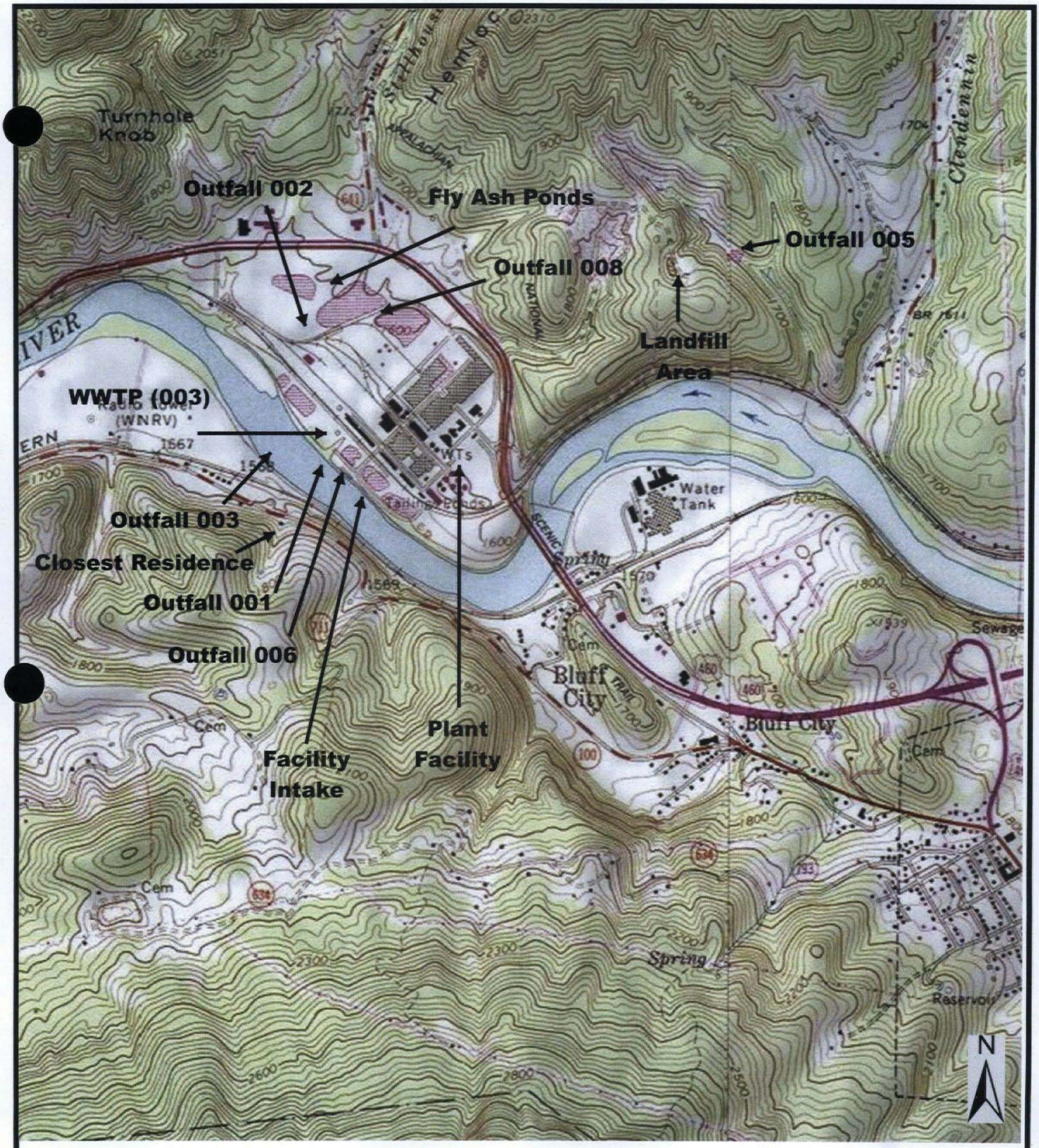
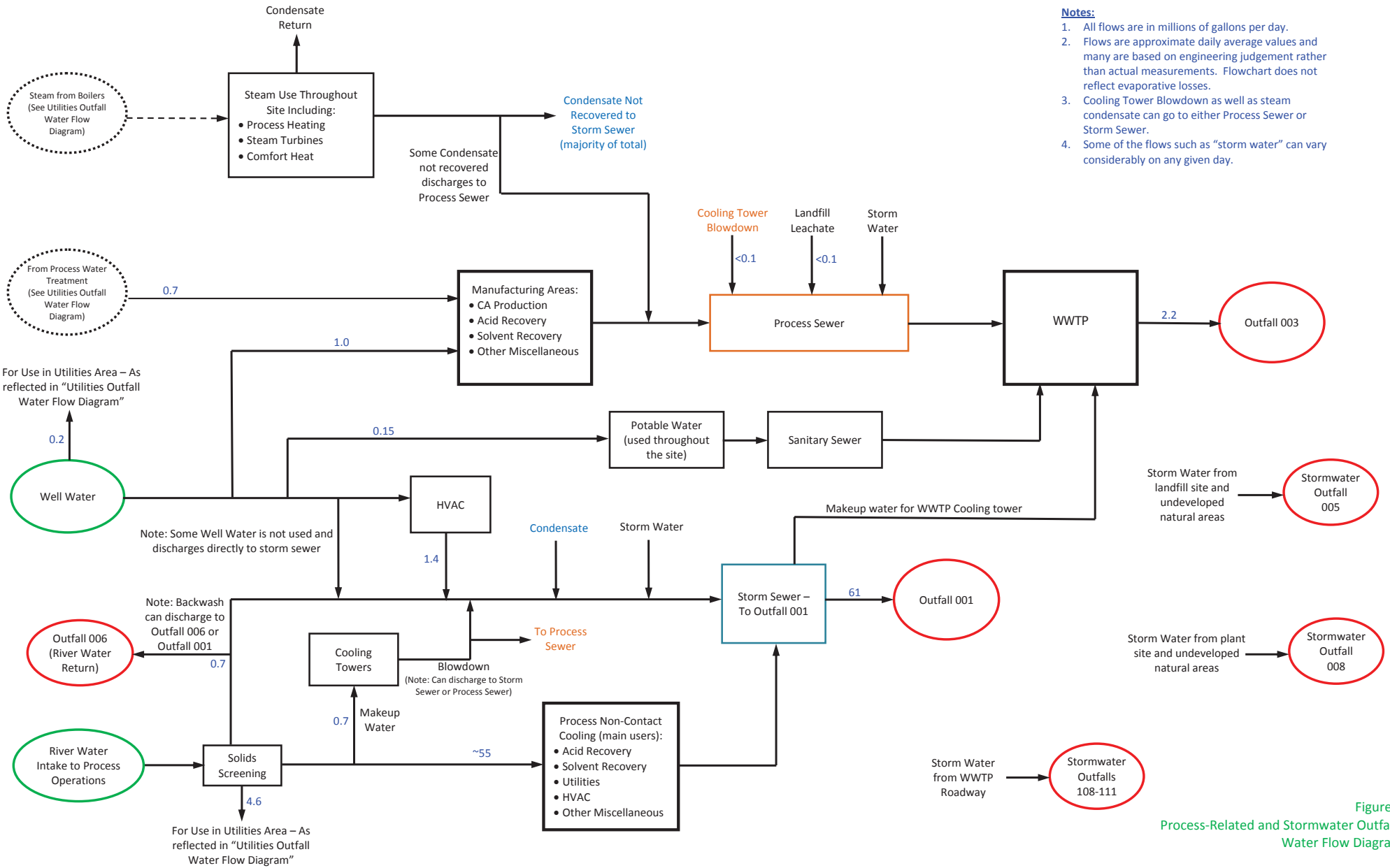


Figure 1: Site Map
VPDES permit VA0000299 Renewal Application Celanese Acetate LLC Narrows, VA

CH2MHILL



Notes:

1. All flows are in millions of gallons per day.
2. Flows are approximate daily average values and many are based on engineering judgement rather than actual measurements. Flowchart does not reflect evaporative losses.
3. Cooling Tower Blowdown as well as steam condensate can go to either Process Sewer or Storm Sewer.
4. Some of the flows such as "storm water" can vary considerably on any given day.

Figure 2
Process-Related and Stormwater Outfalls
Water Flow Diagram

Appendix B
Form 2C for Outfalls 001, 003, 005, and 006

Please print or type in the unshaded areas only.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
VAD005007679

Form Approved.
OMB No. 2040-0086.
Approval expires 3-31-98.

FORM 2C NPDES

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURE OPERATIONS
Consolidated Permits Program

I. OUTFALL LOCATION

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NUMBER (*list*)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (*name*)
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
001	37	20	36	80	46	02	New River
003	37	20	38	80	46	07	New River
005	37	20	56	80	44	52	New River
006	37	20	33	80	45	58	New River

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (*e.g., for certain mining activities*), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures. See Figure 1.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUTFALL NO. (*list*)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT		
	a. OPERATION (*list*)	b. AVERAGE FLOW (*include units*)	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
001	Non-contact cooling water		Declorination with ammonium bisulfite (periodic)	2-E	
	Cooling tower blowdown		Discharge to surface water	4-A	
	Steam and HVAC condensate				
	Storm water runoff				
001, cont.	Intake screen/strainer backwash				
	Outfall 001 total	61 MGD			
003	Process wastewater		Screening; Equalization	1-T	1-O
	Landfill leachate		Activated sludge	3-A	
	Cooling tower blowdown		Sedimentation	1-U	
	Storm water runoff		Sand (Anthracite) filtration	1-R	
003, cont.	Empty drum cleaning		Sludge dewatering; Landfilling	5-R	5-Q
	Sanitary wastewater		Disinfection (Sanitary wastewater only)	2-F	
	Mesityl oxide wastestream		Discharge to surface water	4-A	
	Outfall 003 total	2.2 MGD			
005	Storm water runoff	Intermittent flow	Sedimentation	1-U	
	Spring water from under the fly ash	Flow not measured	Discharge to surface water	4-A	
	landfill				
006	Process water intake	0.700 MGD	Discharge to surface water	4-A	
	Screens and strainer backwash and				
	trash rack sprays				

OFFICIAL USE ONLY (*effluent guidelines sub-categories*)

CONTINUED FROM THE FRONT

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☑ YES (*complete the following table*) ☐ NO (*go to Section III*)

1. OUTFALL NUMBER (*list*)	2. OPERATION(s) CONTRIBUTING FLOW (*list*)	3. FREQUENCY a. DAYS PER WEEK (*specify average*)	3. FREQUENCY b. MONTHS PER YEAR (*specify average*)	4. FLOW a. FLOW RATE (*in mgd*) 1. LONG TERM AVERAGE	4. FLOW a. FLOW RATE (*in mgd*) 2. MAXIMUM DAILY	4. FLOW B. TOTAL VOLUME (*specify with units*) 1. LONG TERM AVERAGE	4. FLOW B. TOTAL VOLUME (*specify with units*) 2. MAXIMUM DAILY	4. FLOW C. DURATION (*in days*)
006	Outfall 006 is comprised of river intake screen and strainer backwash and trash rack sprays. The frequency and flow are dependent on the water quality of the New River.				0.7			
006	Outfall 006 is normally bypassed to the once through cooling ditch (Outfall 001). It is not discharged directly to surface water during chlorination of intake water to control clam growth.				0.7			

III. PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☑ YES (*complete Item III-B*) ☐ NO (*go to Section IV*)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (*or other measure of operation*)?

☐ YES (*complete Item III-C*) ☑ NO (*go to Section IV*)

C. If you answered "yes" to Item III-B, list the quantity which represents an actual measurement of your level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. AVERAGE DAILY PRODUCTION a. QUANTITY PER DAY	1. AVERAGE DAILY PRODUCTION b. UNITS OF MEASURE	1. AVERAGE DAILY PRODUCTION c. OPERATION, PRODUCT, MATERIAL, ETC. (*specify*)	2. AFFECTED OUTFALLS (*list outfall numbers*)

IV. IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operations of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ YES (*complete the following table*) ☑ NO (*go to Item IV-B*)

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS a. NO.	2. AFFECTED OUTFALLS b. SOURCE OF DISCHARGE	3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE a. REQUIRED	4. FINAL COMPLIANCE DATE b. PROJECTED

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (*or other environmental projects which may affect your discharges*) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction.

☐ MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED

CONTINUED FROM PAGE 2

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding – Complete one set of tables for each outfall – Annotate the outfall number in the space provided.
NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered V-1 through V-9.

D. Use the space below to list any of the pollutants listed in Table 2c-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
Not Applicable			

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ YES (*list all such pollutants below*) ☑ NO (*go to Item VI-B*)

CONTINUED FROM THE FRONT

VII. BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☑ YES (*identify the test(s) and describe their purposes below*) ☐ NO (*go to Section VIII*)

Chronic and acute toxicity testing is required by VPDES Permit No.VA0000299 on an annual basis for Outfall 001. Results of this testing are submitted to VDEQ.

Acute toxicity testing is required by VPDES Permit No.VA0000299 on a quarterly basis for Outfall 003. Results of this testing are submitted to VDEQ.

Results of the toxicity tests have been included in Appendix E.

VIII. CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

☑ YES (*list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below*) ☐ NO (*go to Section IX*)

A. NAME	B. ADDRESS	C. TELEPHONE (*area code & no.*)	D. POLLUTANTS ANALYZED (*list*)
Research Environmental & Industrial Consultants, Inc. (REIC)	225 Industrial Park Road Beaver, WV, 25313	304-225-2500	All parameters for Outfalls 001, 111, 003, 005, 501, 502, 503, 006, and 008 except as noted below. Also performed toxicity testing.
Celanese Acetate, LLC	3520 Virginia Avenue Narrows, VA, 24124	540-921-1111	Flow, temperature, pH, total residual chlorine, and TSS at Outfalls 001,and 003. Temperature, ammonia, and pH at Outfall 005. TSS at Outfalls 111, 105, 107, 501, 502, 503, 111 and 008.

IX. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. NAME & OFFICIAL TITLE (*type or print*)	B. PHONE NO. (*area code & no.*)
Kristina Geelmuyden Karlsson - Site Director	(540) 921-1111
C. SIGNATURE	D. DATE SIGNED
[signature]	12-17-2012

Outfall 001 – Form 2C

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*): VAD005007679

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

OUTFALL NO.: Outfall 001

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCENTRATION	3. UNITS b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	<2	N/A					1	mg/L				
b. Chemical Oxygen Demand (*COD*)	<10	N/A					1	mg/L				
c. Total Organic Carbon (*TOC*)	1.34	327					1	mg/L	kg/d			
d. Total Suspended Solids (*TSS*)	2	488					1	mg/L	kg/d			
e. Ammonia (*as N*)	0.25	54.7			0.125	27.4	2	mg/L	kg/d			
f. Flow	VALUE 79.8		VALUE 73.7		VALUE 61.0		1096	mgd		VALUE		
g. Temperature (*winter*)	VALUE 25.6		VALUE 20.8		VALUE 17.6		267	°C		VALUE		
h. Temperature (*summer*)	VALUE 41.1		VALUE 39.3		VALUE 36.8		276	°C		VALUE		
i. pH	MINIMUM 7.0	MAXIMUM 9.0	MINIMUM 7.2	MAXIMUM 8.3			1092	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual		X	<0.100	N/A	<0.100	N/A	<0.100	N/A	1003	mg/L				
c. Color	X		15	N/A					1	CU				
d. Fecal Coliform	X		23	N/A					1	#/100mL				
e. Fluoride (16984-48-8)		X												
f. Nitrate-Nitrite (*as N*)	X		0.92						1	mg/L				

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*)	X		<0.50	N/A					1	mg/L				
h. Oil and Grease		X												
i. Phosphorus (as P), Total (7723-14-0)	X		0.06	14.6					1	mg/L	kg/d			
j. Radioactivity														
(1) Alpha, Total		X												
(2) Beta, Total		X												
(3) Radium, Total		X												
(4) Radium 226, Total		X												
k. Sulfate (*as SO_4*) (14808-79-8)	X		6.80	1,658					1	mg/L	kg/d			
l. Sulfide (*as S*)		X												
m. Sulfite (*as SO_3*) (14265-45-3)		X												
n. Surfactants		X												
o. Aluminum, Total (7429-90-5)	X		<0.100	N/A					1	mg/L				
p. Barium, Total (7440-39-3)	X		<0.100	N/A					1	mg/L				
q. Boron, Total (7440-42-8)	X		<0.100	N/A					1	mg/L				
r. Cobalt, Total (7440-48-4)		X												
s. Iron, Total (7439-89-6)	X		0.124	30.2					1	mg/L	kg/d			
t. Magnesium, Total (7439-95-4)	X		6.21	1,514					1	mg/L	kg/d			
u. Molybdenum, Total (7439-98-7)	X		<0.100	N/A					1	mg/L				
v. Manganese, Total (7439-96-5)	X		<0.100	N/A					1	mg/L				
w. Tin, Total (7440-31-5)		X												
x. Titanium, Total (7440-32-6)		X												

CONTINUE ON PAGE V-3

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
VAD005007679	Outfall 001

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X		X	<0.200	N/A					1	mg/L				
2M. Arsenic, Total (7440-38-2)	X		X	<0.200	N/A					1	mg/L				
3M. Beryllium, Total (7440-41-7)	X		X	<0.010	N/A					1	mg/L				
4M. Cadmium, Total (7440-43-9)	X		X	<0.020	N/A					1	mg/L				
5M. Chromium, Total (7440-47-3)	X		X	<0.100	N/A					1	mg/L				
6M. Copper, Total (7440-50-8)	X	X		<0.100	N/A					1	mg/L				
7M. Lead, Total (7439-92-1)	X	X		<0.200	N/A					1	mg/L				
8M. Mercury, Total (7439-97-6)	X		X	<0.0010	N/A					1	mg/L				
9M. Nickel, Total (7440-02-0)	X		X	<0.100	N/A					1	mg/L				
10M. Selenium, Total (7782-49-2)	X		X	<0.200	N/A					1	mg/L				
11M. Silver, Total (7440-22-4)	X		X	<0.050	N/A					1	mg/L				
12M. Thallium, Total (7440-28-0)	X		X	<0.200	N/A					1	mg/L				
13M. Zinc, Total (7440-66-6)	X	X		<0.050	N/A					1	mg/L				
14M. Cyanide, Total (57-12-5)	X		X	<0.020	N/A					1	mg/L				
15M. Phenols, Total	X		X	<0.010	N/A					1	mg/L				
DIOXIN															
2,3,7,8-Tetrachlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X		X	<10.0	N/A					1	ug/L				
2V. Acrylonitrile (107-13-1)	X		X	<10.0	N/A					1	ug/L				
3V. Benzene (71-43-2)	X		X	<1.0	N/A					1	ug/L				
4V. Bis (*Chloromethyl*) Ether (542-88-1)				***DELISTED***	***02-4-81***	ANALYSIS	NOT	REQUIRED	FOR	THIS					
5V. Bromoform (75-25-2)	X		X	<1.0	N/A					1	ug/L				
6V. Carbon Tetrachloride (56-23-5)	X		X	<1.0	N/A					1	ug/L				
7V. Chlorobenzene (108-90-7)	X		X	<1.0	N/A					1	ug/L				
8V. Chlorodibromomethane (124-48-1)	X		X	<1.0	N/A					1	ug/L				
9V. Chloroethane (75-00-3)	X		X	<1.0	N/A					1	ug/L				
10V. 2-Chloroethylvinyl Ether (110-75-8)	X		X	<5.0	N/A					1	ug/L				
11V. Chloroform (67-66-3)	X		X	<1.0	N/A					1	ug/L				
12V. Dichlorobromomethane (75-27-4)	X		X	<1.0	N/A					1	ug/L				
13V. Dichlorodifluoromethane (75-71-8)				***DELISTED***	***01-8-81***	ANALYSIS	NOT	REQUIRED	FOR	THIS					
14V. 1,1-Dichloroethane (75-34-3)	X		X	<1.0	N/A					1	ug/L				
15V. 1,2-Dichloroethane (107-06-2)	X		X	<1.0	N/A					1	ug/L				
16V. 1,1-Dichloroethylene (75-35-4)	X		X	<1.0	N/A					1	ug/L				
17V. 1,2-Dichloropropane (78-87-5)	X		X	<1.0	N/A					1	ug/L				
18V. 1,3-Dichloropropylene (542-75-6)	X		X	<1.0	N/A					1	ug/L				
19V. Ethylbenzene (100-41-4)	X		X	<1.0	N/A					1	ug/L				
20V. Methyl Bromide (74-83-9)	X		X	<1.0	N/A					1	ug/L				
21V. Methyl Chloride (74-87-3)	X		X	<1.0	N/A					1	ug/L				

CONTINUE ON PAGE V-5

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)	X		X	<1.0	N/A					1	ug/L				
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X		X	<1.0	N/A					1	ug/L				
24V. Tetrachloroethylene (127-18-4)	X		X	<1.0	N/A					1	ug/L				
25V. Toluene (108-88-3)	X		X	<1.0	N/A					1	ug/L				
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X		X	<1.0	N/A					1	ug/L				
27V. 1,1,1-Trichloroethane (71-55-6)	X		X	<1.0	N/A					1	ug/L				
28V. 1,1,2-Trichloroethane (79-00-5)	X		X	<1.0	N/A					1	ug/L				
29V Trichloroethylene (79-01-6)	X		X	<1.0	N/A					1	ug/L				
30V. Trichlorofluoromethane (75-69-4)				***DELISTED***	***01-8-81***	ANALYSIS	NOT	REQUIRED	FOR	THIS					
31V. Vinyl Chloride (75-01-4)	X		X	<1.0	N/A					1	ug/L				
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X		X	<0.0106	N/A					1	mg/L				
2A. 2,4-Dichlorophenol (120-83-2)	X		X	<0.0106	N/A					1	mg/L				
3A. 2,4-Dimethylphenol (105-67-9)	X		X	<0.0106	N/A					1	mg/L				
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X		X	<0.0106	N/A					1	mg/L				
5A. 2,4-Dinitrophenol (51-28-5)	X		X	<0.0106	N/A					1	mg/L				
6A. 2-Nitrophenol (88-75-5)	X		X	<0.0106	N/A					1	mg/L				
7A. 4-Nitrophenol (100-02-7)	X		X	<0.0106	N/A					1	mg/L				
8A. P-Chloro-M-Cresol (59-50-7)	X		X	<0.0106	N/A					1	mg/L				
9A. Pentachlorophenol (87-86-5)	X		X	<0.0106	N/A					1	mg/L				
10A. Phenol (108-95-2)	X		X	<0.0106	N/A					1	mg/L				
11A. 2,4,6-Trichlorophenol (88-05-2)	X		X	<0.0106	N/A					1	mg/L				

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X		X	<0.0106	N/A					1	mg/L				
2B. Acenaphtylene (208-96-8)	X		X	<0.0106	N/A					1	mg/L				
3B. Anthracene (120-12-7)	X		X	<0.0106	N/A					1	mg/L				
4B. Benzidine (92-87-5)	X		X	<0.0106	N/A					1	mg/L				
5B. Benzo (*a*) Anthracene (56-55-3)	X		X	<0.0106	N/A					1	mg/L				
6B. Benzo (*a*) Pyrene (50-32-8)	X		X	<0.0106	N/A					1	mg/L				
7B. 3,4-Benzo-fluoranthene (205-99-2)	X		X	<0.0106	N/A					1	mg/L				
8B. Benzo (*ghi*) Perylene (191-24-2)	X		X	<0.0106	N/A					1	mg/L				
9B. Benzo (*k*) Fluoranthene (207-08-9)	X		X	<0.0106	N/A					1	mg/L				
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)	X		X	<0.0106	N/A					1	mg/L				
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)	X		X	<0.0106	N/A					1	mg/L				
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)	X		X	<0.0106	N/A					1	mg/L				
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)	X		X	<0.0106	N/A					1	mg/L				
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	X		X	<0.0106	N/A					1	mg/L				
15B. Butyl Benzyl Phthalate (85-68-7)	X		X	<0.0106	N/A					1	mg/L				
16B. 2-Chloro-naphthalene (91-58-7)	X		X	<0.0106	N/A					1	mg/L				
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)	X		X	<0.0106	N/A					1	mg/L				
18B. Chrysene (218-01-9)	X		X	<0.0106	N/A					1	mg/L				
19B. Dibenzo (*a,h*) Anthracene (53-70-3)	X		X	<0.0106	N/A					1	mg/L				
20B. 1,2-Dichloro-benzene (95-50-1)	X		X	<0.0106	N/A					1	mg/L				
21B. 1,3-Di-chloro-benzene (541-73-1)	X		X	<0.0106	N/A					1	mg/L				

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichlorobenzene (106-46-7)	X		X	<0.0106	N/A					1	mg/L				
23B. 3,3-Dichlorobenzidine (91-94-1)	X		X	<0.0106	N/A					1	mg/L				
24B. Diethyl Phthalate (84-66-2)	X		X	<0.0106	N/A					1	mg/L				
25B. Dimethyl Phthalate (131 -11-3)	X		X	<0.0106	N/A					1	mg/L				
26B. Di-N-Butyl Phthalate (84-74-2)	X		X	<0.0106	N/A					1	mg/L				
27B. 2,4-Dinitrotoluene (121-14-2)	X		X	<0.0106	N/A					1	mg/L				
28B. 2,6-Dinitrotoluene (606-20-2)	X		X	<0.0106	N/A					1	mg/L				
29B. Di-N-Octyl Phthalate (117-84-0)	X		X	<0.0106	N/A					1	mg/L				
30B. 1,2-Diphenylhydrazine (as *Azobenzene*) (122-66-7)	X		X	<0.0106	N/A					1	mg/L				
31B. Fluoranthene (206-44-0)	X		X	<0.0106	N/A					1	mg/L				
32B. Fluorene (86-73-7)	X		X	<0.0106	N/A					1	mg/L				
33B. Hexachlorobenzene (118-74-1)	X		X	<0.0106	N/A					1	mg/L				
34B. Hexachlorobutadiene (87-68-3)	X		X	<0.0106	N/A					1	mg/L				
35B. Hexachlorocyclopentadiene (77-47-4)	X		X	<0.0106	N/A					1	mg/L				
36B Hexachloroethane (67-72-1)	X		X	<0.0106	N/A					1	mg/L				
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)	X		X	<0.0106	N/A					1	mg/L				
38B. Isophorone (78-59-1)	X		X	<0.0106	N/A					1	mg/L				
39B. Naphthalene (91-20-3)	X		X	<0.0106	N/A					1	mg/L				
40B. Nitrobenzene (98-95-3)	X		X	<0.0106	N/A					1	mg/L				
41B. N-Nitrosodimethylamine (62-75-9)	X		X	<0.0106	N/A					1	mg/L				
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X		X	<0.0106	N/A					1	mg/L				

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitrosodiphenylamine (86-30-6)	X		X	<0.0106	N/A					1	mg/L				
44B. Phenanthrene (85-01-8)	X		X	<0.0106	N/A					1	mg/L				
45B. Pyrene (129-00-0)	X		X	<0.0106	N/A					1	mg/L				
46B. 1,2,4-Trichlorobenzene (120-82-1)	X		X	<0.0106	N/A					1	mg/L				
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)	X		X	<0.516	N/A					1	ug/L				
2P. α-BHC (319-84-6)	X		X	<0.516	N/A					1	ug/L				
3P. β-BHC (319-85-7)	X		X	<0.516	N/A					1	ug/L				
4P. γ-BHC (58-89-9)	X		X	<0.516	N/A					1	ug/L				
5P. δ-BHC (319-86-8)	X		X	<0.516	N/A					1	ug/L				
6P. Chlordane (57-74-9)	X		X	<5.16	N/A					1	ug/L				
7P. 4,4'-DDT (50-29-3)	X		X	<0.516	N/A					1	ug/L				
8P. 4,4'-DDE (72-55-9)	X		X	<0.516	N/A					1	ug/L				
9P. 4,4'-DDD (72-54-8)	X		X	<0.516	N/A					1	ug/L				
10P. Dieldrin (60-57-1)	X		X	<0.516	N/A					1	ug/L				
11P. α-Enosulfan (115-29-7)	X		X	<0.516	N/A					1	ug/L				
12P. β-Endosulfan (115-29-7)	X		X	<0.516	N/A					1	ug/L				
13P. Endosulfan Sulfate (1031-07-8)	X		X	<0.516	N/A					1	ug/L				
14P. Endrin (72-20-8)	X		X	<0.516	N/A					1	ug/L				
15P. Endrin Aldehyde (7421-93-4)	X		X	<0.516	N/A					1	ug/L				
16P. Heptachlor (76-44-8)	X		X	<0.516	N/A					1	ug/L				

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1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)	X		X	<0.516	N/A					1	ug/L				
18P. PCB-1242 (53469-21-9)	X		X	<0.516	N/A					1	ug/L				
19P. PCB-1254 (11097-69-1)	X		X	<0.516	N/A					1	ug/L				
20P. PCB-1221 (11104-28-2)	X		X	<0.516	N/A					1	ug/L				
21P. PCB-1232 (11141-16-5)	X		X	<0.516	N/A					1	ug/L				
22P. PCB-1248 (12672-29-6)	X		X	<0.516	N/A					1	ug/L				
23P. PCB-1260 (11096-82-5)	X		X	<0.516	N/A					1	ug/L				
24P. PCB-1016 (12674-11-2)	X		X	<0.516	N/A					1	ug/L				
25P. Toxaphene (8001-35-2)	X		X	<5.16	N/A					1	ug/L				

Outfall 003 – Form 2C

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*): VAD005007679

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V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCEN-TRATION	b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	11	89	5.6	46	5	42	784	mg/L	kg/d			
b. Chemical Oxygen Demand (*COD*)	18	164					1	mg/L	kg/d			
c. Total Organic Carbon (*TOC*)	11.1	101					1	mg/L	kg/d			
d. Total Suspended Solids (*TSS*)	47.1	404	14.6	130	7.5	62	1094	mg/L	kg/d			
e. Ammonia (*as N*)	0.012	0.10			0.006	0.05	2	mg/L	kg/d			
f. Flow	VALUE 2.6		VALUE 2.4		VALUE 2.2		1096	mgd		VALUE		
g. Temperature (*winter*)	VALUE 32.1		VALUE 31.1		VALUE 29.4		150	°C		VALUE		
h. Temperature (*summer*)	VALUE 32.9		VALUE 32.1		VALUE 31.4		92	°C		VALUE		
i. pH	MINIMUM 4.9	MAXIMUM 8.0	MINIMUM 7.0	MAXIMUM 7.7			1096	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual		X	<0.10	N/A					2	mg/L				
c. Color	X		20	N/A					1	CU				
d. Fecal Coliform	X		40	N/A					1	#/100 mL				
e. Fluoride (16984-48-8)	X		1.87	17.0					1	mg/L	kg/d			
f. Nitrate-Nitrite (*as N*)	X		15.1	137					1	mg/L	kg/d			

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*)	X		0.53	4.82					1	mg/L	kg/d			
h. Oil and Grease		X												
i. Phosphorus (as P), Total (7723-14-0)	X		10.3	93.6					1	mg/L	kg/d			
j. Radioactivity														
(1) Alpha, Total		X												
(2) Beta, Total		X												
(3) Radium, Total		X												
(4) Radium 226, Total		X												
k. Sulfate (*as SO_4*) (14808-79-8)	X		2630	23,891					1	mg/L	kg/d			
l. Sulfide (*as S*)		X												
m. Sulfite (*as SO_3*) (14265-45-3)		X												
n. Surfactants	X		<0.250	N/A					1	mg/L				
o. Aluminum, Total (7429-90-5)	X		1.61	14.6					1	mg/L	kg/d			
p. Barium, Total (7440-39-3)	X		<0.100	N/A					1	mg/L				
q. Boron, Total (7440-42-8)	X		0.267	2.43					1	mg/L	kg/d			
r. Cobalt, Total (7440-48-4)		X												
s. Iron, Total (7439-89-6)	X		<0.100	N/A					1	mg/L				
t. Magnesium, Total (7439-95-4)	X		762	6,922					1	mg/L	kg/d			
u. Molybdenum, Total (7439-98-7)	X		<0.100	N/A					1	mg/L				
v. Manganese, Total (7439-96-5)	X		<0.100	N/A					1	mg/L				
w. Tin, Total (7440-31-5)		X												
x. Titanium, Total (7440-32-6)		X												

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
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CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X	X		<0.200	N/A					1	mg/L				
2M. Arsenic, Total (7440-38-2)	X		X	<0.200	N/A					1	mg/L				
3M. Beryllium, Total (7440-41-7)	X		X	<0.010	N/A					1	mg/L				
4M. Cadmium, Total (7440-43-9)	X		X	<0.020	N/A					1	mg/L				
5M. Chromium, Total (7440-47-3)	X	X		<0.100	N/A	<0.100	N/A	<0.100	N/A	12	mg/L				
6M. Copper, Total (7440-50-8)	X	X		<0.100	N/A	<0.100	N/A	<0.100	N/A	12	mg/L				
7M. Lead, Total (7439-92-1)	X	X		<0.200	N/A					1	mg/L				
8M. Mercury, Total (7439-97-6)	X		X	<0.0010	N/A					1	mg/L				
9M. Nickel, Total (7440-02-0)	X	X		0.174	1,461	0.174	1,461	0.129	1,067	12	mg/L	g/d			
10M. Selenium, Total (7782-49-2)	X		X	<0.200	N/A					1	mg/L				
11M. Silver, Total (7440-22-4)	X		X	<0.050	N/A					1	mg/L				
12M. Thallium, Total (7440-28-0)	X		X	<0.200	N/A					1	mg/L				
13M. Zinc, Total (7440-66-6)	X	X		0.280	2.54					1	mg/L	kg/d			
14M. Cyanide, Total (57-12-5)	X		X	<0.020	N/A					1	mg/L				
15M. Phenols, Total	X	X		<0.010	N/A					1	mg/L				
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X		X	<10.0	N/A					1	ug/L				
2V. Acrylonitrile (107-13-1)	X		X	<10.0	N/A					1	ug/L				
3V. Benzene (71-43-2)	X		X	<1.0	N/A					1	ug/L				
4V. Bis (*Chloromethyl*) Ether (542-88-1)				***DELISTED***	***02-4-81***	ANALYSIS	NOT	REQUIRED	FOR	THIS					
5V. Bromoform (75-25-2)	X		X	<1.0	N/A					1	ug/L				
6V. Carbon Tetrachloride (56-23-5)	X		X	<1.0	N/A					1	ug/L				
7V. Chlorobenzene (108-90-7)	X		X	<1.0	N/A					1	ug/L				
8V. Chlorodibromomethane (124-48-1)	X		X	<1.0	N/A					1	ug/L				
9V. Chloroethane (75-00-3)	X		X	<1.0	N/A					1	ug/L				
10V. 2-Chloroethylvinyl Ether (110-75-8)	X		X	<5.0	N/A					1	ug/L				
11V. Chloroform (67-66-3)	X		X	<1.0	N/A					1	ug/L				
12V. Dichlorobromomethane (75-27-4)	X		X	<1.0	N/A					1	ug/L				
13V. Dichlorodifluoromethane (75-71-8)				***DELISTED***	***01-8-81***	ANALYSIS	NOT	REQUIRED	FOR	THIS					
14V. 1,1-Dichloroethane (75-34-3)	X		X	<1.0	N/A					1	ug/L				
15V. 1,2-Dichloroethane (107-06-2)	X		X	<1.0	N/A					1	ug/L				
16V. 1,1-Dichloroethylene (75-35-4)	X		X	<1.0	N/A					1	ug/L				
17V. 1,2-Dichloropropane (78-87-5)	X		X	<1.0	N/A					1	ug/L				
18V. 1,3-Dichloropropylene (542-75-6)	X		X	<1.0	N/A					1	ug/L				
19V. Ethylbenzene (100-41-4)	X		X	<1.0	N/A					1	ug/L				
20V. Methyl Bromide (74-83-9)	X		X	<1.0	N/A					1	ug/L				
21V. Methyl Chloride (74-87-3)	X		X	<1.0	N/A					1	ug/L				

CONTINUE ON PAGE V-5

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)	X		X	<1.0	N/A					1	ug/L				
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X		X	<1.0	N/A					1	ug/L				
24V. Tetrachloroethylene (127-18-4)	X		X	<1.0	N/A					1	ug/L				
25V. Toluene (108-88-3)	X		X	<1.0	N/A					1	ug/L				
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X		X	<1.0	N/A					1	ug/L				
27V. 1,1,1-Trichloroethane (71-55-6)	X		X	<1.0	N/A					1	ug/L				
28V. 1,1,2-Trichloroethane (79-00-5)	X		X	<1.0	N/A					1	ug/L				
29V Trichloroethylene (79-01-6)	X		X	<1.0	N/A					1	ug/L				
30V. Trichlorofluoromethane (75-69-4)				***DELISTED***	***01-8-81***	ANALYSIS	NOT	REQUIRED	FOR	THIS					
31V. Vinyl Chloride (75-01-4)	X		X	<1.0	N/A					1	ug/L				
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X		X	<0.0108	N/A					1	mg/L				
2A. 2,4-Dichlorophenol (120-83-2)	X		X	<0.0108	N/A					1	mg/L				
3A. 2,4-Dimethylphenol (105-67-9)	X		X	<0.0108	N/A					1	mg/L				
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X		X	<0.0108	N/A					1	mg/L				
5A. 2,4-Dinitrophenol (51-28-5)	X		X	<0.0108	N/A					1	mg/L				
6A. 2-Nitrophenol (88-75-5)	X		X	<0.0108	N/A					1	mg/L				
7A. 4-Nitrophenol (100-02-7)	X		X	<0.0108	N/A					1	mg/L				
8A. P-Chloro-M-Cresol (59-50-7)	X		X	<0.0108	N/A					1	mg/L				
9A. Pentachlorophenol (87-86-5)	X		X	<0.0108	N/A					1	mg/L				
10A. Phenol (108-95-2)	X		X	<0.0108	N/A					1	mg/L				
11A. 2,4,6-Trichlorophenol (88-05-2)	X		X	<0.0108	N/A					1	mg/L				

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X		X	<0.0108	N/A					1	mg/L				
2B. Acenaphtylene (208-96-8)	X		X	<0.0108	N/A					1	mg/L				
3B. Anthracene (120-12-7)	X		X	<0.0108	N/A					1	mg/L				
4B. Benzidine (92-87-5)	X		X	<0.0108	N/A					1	mg/L				
5B. Benzo (*a*) Anthracene (56-55-3)	X		X	<0.0108	N/A					1	mg/L				
6B. Benzo (*a*) Pyrene (50-32-8)	X		X	<0.0108	N/A					1	mg/L				
7B. 3,4-Benzo-fluoranthene (205-99-2)	X		X	<0.0108	N/A					1	mg/L				
8B. Benzo (*ghi*) Perylene (191-24-2)	X		X	<0.0108	N/A					1	mg/L				
9B. Benzo (*k*) Fluoranthene (207-08-9)	X		X	<0.0108	N/A					1	mg/L				
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)	X		X	<0.0108	N/A					1	mg/L				
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)	X		X	<0.0108	N/A					1	mg/L				
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)	X		X	<0.0108	N/A					1	mg/L				
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)	X		X	<0.0108	N/A					1	mg/L				
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	X		X	<0.0108	N/A					1	mg/L				
15B. Butyl Benzyl Phthalate (85-68-7)	X		X	<0.0108	N/A					1	mg/L				
16B. 2-Chloro-naphthalene (91-58-7)	X		X	<0.0108	N/A					1	mg/L				
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)	X		X	<0.0108	N/A					1	mg/L				
18B. Chrysene (218-01-9)	X		X	<0.0108	N/A					1	mg/L				
19B. Dibenzo (*a,h*) Anthracene (53-70-3)	X		X	<0.0108	N/A					1	mg/L				
20B. 1,2-Dichloro-benzene (95-50-1)	X		X	<0.0108	N/A					1	mg/L				
21B. 1,3-Di-chloro-benzene (541-73-1)	X		X	<0.0108	N/A					1	mg/L				

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichlorobenzene (106-46-7)	X		X	<0.0108	N/A					1	mg/L				
23B. 3,3-Dichlorobenzidine (91-94-1)	X		X	<0.0108	N/A					1	mg/L				
24B. Diethyl Phthalate (84-66-2)	X		X	<0.0108	N/A					1	mg/L				
25B. Dimethyl Phthalate (131-11-3)	X		X	<0.0108	N/A					1	mg/L				
26B. Di-N-Butyl Phthalate (84-74-2)	X		X	<0.0108	N/A					1	mg/L				
27B. 2,4-Dinitrotoluene (121-14-2)	X		X	<0.0108	N/A					1	mg/L				
28B. 2,6-Dinitrotoluene (606-20-2)	X		X	<0.0108	N/A					1	mg/L				
29B. Di-N-Octyl Phthalate (117-84-0)	X		X	<0.0108	N/A					1	mg/L				
30B. 1,2-Diphenylhydrazine (*as Azobenzene*) (122-66-7)	X		X	<0.0108	N/A					1	mg/L				
31B. Fluoranthene (206-44-0)	X		X	<0.0108	N/A					1	mg/L				
32B. Fluorene (86-73-7)	X		X	<0.0108	N/A					1	mg/L				
33B. Hexachlorobenzene (118-74-1)	X		X	<0.0108	N/A					1	mg/L				
34B. Hexachlorobutadiene (87-68-3)	X		X	<0.0108	N/A					1	mg/L				
35B. Hexachlorocyclopentadiene (77-47-4)	X		X	<0.0108	N/A					1	mg/L				
36B Hexachloroethane (67-72-1)	X		X	<0.0108	N/A					1	mg/L				
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)	X		X	<0.0108	N/A					1	mg/L				
38B. Isophorone (78-59-1)	X		X	<0.0108	N/A					1	mg/L				
39B. Naphthalene (91-20-3)	X		X	<0.0108	N/A					1	mg/L				
40B. Nitrobenzene (98-95-3)	X		X	<0.0108	N/A					1	mg/L				
41B. N-Nitrosodimethylamine (62-75-9)	X		X	<0.0108	N/A					1	mg/L				
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X		X	<0.0108	N/A					1	mg/L				

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitro-sodiphenylamine (86-30-6)	X		X	<0.0108	N/A					1	mg/L				
44B. Phenanthrene (85-01-8)	X		X	<0.0108	N/A					1	mg/L				
45B. Pyrene (129-00-0)	X		X	<0.0108	N/A					1	mg/L				
46B. 1,2,4-Tri-chlorobenzene (120-82-1)	X		X	<0.0108	N/A					1	mg/L				
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)	X		X	<0.523	N/A					1	ug/L				
2P. α-BHC (319-84-6)	X		X	<0.523	N/A					1	ug/L				
3P. β-BHC (319-85-7)	X		X	<0.523	N/A					1	ug/L				
4P. γ-BHC (58-89-9)	X		X	<0.523	N/A					1	ug/L				
5P. δ-BHC (319-86-8)	X		X	<0.523	N/A					1	ug/L				
6P. Chlordane (57-74-9)	X		X	<5.23	N/A					1	ug/L				
7P. 4,4'-DDT (50-29-3)	X		X	<0.523	N/A					1	ug/L				
8P. 4,4'-DDE (72-55-9)	X		X	<0.523	N/A					1	ug/L				
9P. 4,4'-DDD (72-54-8)	X		X	<0.523	N/A					1	ug/L				
10P. Dieldrin (60-57-1)	X		X	<0.523	N/A					1	ug/L				
11P. α-Enosulfan (115-29-7)	X		X	<0.523	N/A					1	ug/L				
12P. β-Endosulfan (115-29-7)	X		X	<0.523	N/A					1	ug/L				
13P. Endosulfan Sulfate (1031-07-8)	X		X	<0.523	N/A					1	ug/L				
14P. Endrin (72-20-8)	X		X	<0.523	N/A					1	ug/L				
15P. Endrin Aldehyde (7421-93-4)	X		X	<0.523	N/A					1	ug/L				
16P. Heptachlor (76-44-8)	X		X	<0.523	N/A					1	ug/L				

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
VAD005007679	Outfall 003

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)	X		X	<0.523	N/A					1	ug/L				
18P. PCB-1242 (53469-21-9)	X		X	<0.523	N/A					1	ug/L				
19P. PCB-1254 (11097-69-1)	X		X	<0.523	N/A					1	ug/L				
20P. PCB-1221 (11104-28-2)	X		X	<0.523	N/A					1	ug/L				
21P. PCB-1232 (11141-16-5)	X		X	<0.523	N/A					1	ug/L				
22P. PCB-1248 (12672-29-6)	X		X	<0.523	N/A					1	ug/L				
23P. PCB-1260 (11096-82-5)	X		X	<0.523	N/A					1	ug/L				
24P. PCB-1016 (12674-11-2)	X		X	<0.523	N/A					1	ug/L				
25P. Toxaphene (8001-35-2)	X		X	<5.23	N/A					1	ug/L				

Outfall 005 – Form 2C

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
VAD005007679

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

OUTFALL NO.
Outfall 005

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT							3. UNITS (*specify if blank*)		4. INTAKE (*optional*)		
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (*BOD*)	<2	N/A					1	mg/L				
b. Chemical Oxygen Demand (*COD*)	<10	N/A					1	mg/L				
c. Total Organic Carbon (*TOC*)	2.91	106					1	mg/L	g/d			
d. Total Suspended Solids (*TSS*)	3	109					1	mg/L	g/d			
e. Ammonia (*as N*)	11.8	N/A	11.8	N/A	4.56	N/A	12	mg/L				
f. Flow	VALUE 0.072		VALUE 0.072		VALUE 0.023		12	mgd		VALUE		
g. Temperature (*winter*)	VALUE 5.1		VALUE 5.1		VALUE 4.5		2	°C		VALUE		
h. Temperature (*summer*)	VALUE 25.0		VALUE 25.0		VALUE 22.8		3	°C		VALUE		
i. pH	MINIMUM 7.16	MAXIMUM 8.10	MINIMUM 7.16	MAXIMUM 8.10			12	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual		X												
c. Color	X		20	N/A					1	CU				
d. Fecal Coliform	X		8	N/A					1	#/100mL				
e. Fluoride (16984-48-8)	X		0.54	19.6					1	mg/L	g/d			
f. Nitrate-Nitrite (*as N*)	X		2.44	88.7					1	mg/L	g/d			

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*)	X		1.79	65.0					1	mg/L	g/d			
h. Oil and Grease		X												
i. Phosphorus (as P), Total (7723-14-0)	X		1.02	37.1					1	mg/L	g/d			
j. Radioactivity														
(1) Alpha, Total		X												
(2) Beta, Total		X												
(3) Radium, Total		X												
(4) Radium 226, Total		X												
k. Sulfate (*as SO_4*) (14808-79-8)	X		<5.00	N/A					1	mg/L				
l. Sulfide (*as S*)		X												
m. Sulfite (*as SO_3*) (14265-45-3)		X												
n. Surfactants		X												
o. Aluminum, Total (7429-90-5)	X		<0.100	N/A					1	mg/L				
p. Barium, Total (7440-39-3)	X		0.793	28.8					1	mg/L	g/d			
q. Boron, Total (7440-42-8)	X		1.25	45.4					1	mg/L	g/d			
r. Cobalt, Total (7440-48-4)		X												
s. Iron, Total (7439-89-6)	X		0.109	4.0					1	mg/L	g/d			
t. Magnesium, Total (7439-95-4)	X		46.5	1,690					1	mg/L	g/d			
u. Molybdenum, Total (7439-98-7)		X	<0.100	N/A					1	mg/L				
v. Manganese, Total (7439-96-5)	X		0.336	12.2					1	mg/L	g/d			
w. Tin, Total (7440-31-5)		X												
x. Titanium, Total (7440-32-6)		X												

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
VAD005007679	Outfall 005

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X		X	<0.200	N/A					1	mg/L				
2M. Arsenic, Total (7440-38-2)	X		X	<0.200	N/A					1	mg/L				
3M. Beryllium, Total (7440-41-7)	X		X	<0.010	N/A					1	mg/L				
4M. Cadmium, Total (7440-43-9)	X		X	<0.020	N/A					1	mg/L				
5M. Chromium, Total (7440-47-3)	X		X	<0.100	N/A					1	mg/L				
6M. Copper, Total (7440-50-8)	X		X	<0.100	N/A					1	mg/L				
7M. Lead, Total (7439-92-1)	X		X	<0.200	N/A					1	mg/L				
8M. Mercury, Total (7439-97-6)	X		X	<0.0010	N/A					1	mg/L				
9M. Nickel, Total (7440-02-0)	X		X	<0.100	N/A					1	mg/L				
10M. Selenium, Total (7782-49-2)	X		X	<0.200	N/A					1	mg/L				
11M. Silver, Total (7440-22-4)	X		X	<0.050	N/A					1	mg/L				
12M. Thallium, Total (7440-28-0)	X		X	<0.200	N/A					1	mg/L				
13M. Zinc, Total (7440-66-6)	X		X	<0.050	N/A					1	mg/L				
14M. Cyanide, Total (57-12-5)	X		X	<0.020	N/A					1	mg/L				
15M. Phenols, Total	X		X	<0.010	N/A					1	mg/L				
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X		X	<10.0	N/A					1	ug/L				
2V. Acrylonitrile (107-13-1)	X		X	<10.0	N/A					1	ug/L				
3V. Benzene (71-43-2)	X		X	<1.0	N/A					1	ug/L				
4V. Bis (*Chloromethyl*) Ether (542-88-1)				***DELISTED***	***02-4-81***	ANALYSIS	NOT	REQUIRED	FOR	THIS					
5V. Bromoform (75-25-2)	X		X	<1.0	N/A					1	ug/L				
6V. Carbon Tetrachloride (56-23-5)	X		X	<1.0	N/A					1	ug/L				
7V. Chlorobenzene (108-90-7)	X		X	<1.0	N/A					1	ug/L				
8V. Chlorodibromomethane (124-48-1)	X		X	<1.0	N/A					1	ug/L				
9V. Chloroethane (75-00-3)	X		X	<1.0	N/A					1	ug/L				
10V. 2-Chloroethylvinyl Ether (110-75-8)	X		X	<5.0	N/A					1	ug/L				
11V. Chloroform (67-66-3)	X		X	<1.0	N/A					1	ug/L				
12V. Dichlorobromomethane (75-27-4)	X		X	<1.0	N/A					1	ug/L				
13V. Dichlorodifluoromethane (75-71-8)				***DELISTED***	***01-8-81***	ANALYSIS	NOT	REQUIRED	FOR	THIS					
14V. 1,1-Dichloroethane (75-34-3)	X		X	<1.0	N/A					1	ug/L				
15V. 1,2-Dichloroethane (107-06-2)	X		X	<1.0	N/A					1	ug/L				
16V. 1,1-Dichloroethylene (75-35-4)	X		X	<1.0	N/A					1	ug/L				
17V. 1,2-Dichloropropane (78-87-5)	X		X	<1.0	N/A					1	ug/L				
18V. 1,3-Dichloropropylene (542-75-6)	X		X	<1.0	N/A					1	ug/L				
19V. Ethylbenzene (100-41-4)	X		X	<1.0	N/A					1	ug/L				
20V. Methyl Bromide (74-83-9)	X		X	<1.0	N/A					1	ug/L				
21V. Methyl Chloride (74-87-3)	X		X	<1.0	N/A					1	ug/L				

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)	X		X	<1.0	N/A					1	ug/L				
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X		X	<1.0	N/A					1	ug/L				
24V. Tetrachloroethylene (127-18-4)	X		X	<1.0	N/A					1	ug/L				
25V. Toluene (108-88-3)	X		X	<1.0	N/A					1	ug/L				
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X		X	<1.0	N/A					1	ug/L				
27V. 1,1,1-Trichloroethane (71-55-6)	X		X	<1.0	N/A					1	ug/L				
28V. 1,1,2-Trichloroethane (79-00-5)	X		X	<1.0	N/A					1	ug/L				
29V Trichloroethylene (79-01-6)	X		X	<1.0	N/A					1	ug/L				
30V. Trichlorofluoromethane (75-69-4)				***DELISTED***	***01-8-81***	ANALYSIS	NOT	REQUIRED	FOR	THIS					
31V. Vinyl Chloride (75-01-4)	X		X	<1.0	N/A					1	ug/L				
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X		X	<0.0101	N/A					1	mg/L				
2A. 2,4-Dichlorophenol (120-83-2)	X		X	<0.0101	N/A					1	mg/L				
3A. 2,4-Dimethylphenol (105-67-9)	X		X	<0.0101	N/A					1	mg/L				
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X		X	<0.0101	N/A					1	mg/L				
5A. 2,4-Dinitrophenol (51-28-5)	X		X	<0.0101	N/A					1	mg/L				
6A. 2-Nitrophenol (88-75-5)	X		X	<0.0101	N/A					1	mg/L				
7A. 4-Nitrophenol (100-02-7)	X		X	<0.0101	N/A					1	mg/L				
8A. P-Chloro-M-Cresol (59-50-7)	X		X	<0.0101	N/A					1	mg/L				
9A. Pentachlorophenol (87-86-5)	X		X	<0.0101	N/A					1	mg/L				
10A. Phenol (108-95-2)	X		X	<0.0101	N/A					1	mg/L				
11A. 2,4,6-Trichlorophenol (88-05-2)	X		X	<0.0101	N/A					1	mg/L				

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X		X	<0.0101	N/A					1	mg/L				
2B. Acenaphtylene (208-96-8)	X		X	<0.0101	N/A					1	mg/L				
3B. Anthracene (120-12-7)	X		X	<0.0101	N/A					1	mg/L				
4B. Benzidine (92-87-5)	X		X	<0.0101	N/A					1	mg/L				
5B. Benzo (*a*) Anthracene (56-55-3)	X		X	<0.0101	N/A					1	mg/L				
6B. Benzo (*a*) Pyrene (50-32-8)	X		X	<0.0101	N/A					1	mg/L				
7B. 3,4-Benzo-fluoranthene (205-99-2)	X		X	<0.0101	N/A					1	mg/L				
8B. Benzo (*ghi*) Perylene (191-24-2)	X		X	<0.0101	N/A					1	mg/L				
9B. Benzo (*k*) Fluoranthene (207-08-9)	X		X	<0.0101	N/A					1	mg/L				
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)	X		X	<0.0101	N/A					1	mg/L				
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)	X		X	<0.0101	N/A					1	mg/L				
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)	X		X	<0.0101	N/A					1	mg/L				
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)	X		X	<0.0101	N/A					1	mg/L				
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	X		X	<0.0101	N/A					1	mg/L				
15B. Butyl Benzyl Phthalate (85-68-7)	X		X	<0.0101	N/A					1	mg/L				
16B. 2-Chloro-naphthalene (91-58-7)	X		X	<0.0101	N/A					1	mg/L				
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)	X		X	<0.0101	N/A					1	mg/L				
18B. Chrysene (218-01-9)	X		X	<0.0101	N/A					1	mg/L				
19B. Dibenzo (*a,h*) Anthracene (53-70-3)	X		X	<0.0101	N/A					1	mg/L				
20B. 1,2-Dichloro-benzene (95-50-1)	X		X	<0.0101	N/A					1	mg/L				
21B. 1,3-Di-chloro-benzene (541-73-1)	X		X	<0.0101	N/A					1	mg/L				

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichlorobenzene (106-46-7)	X		X	<0.0101	N/A					1	mg/L				
23B. 3,3-Dichlorobenzidine (91-94-1)	X		X	<0.0101	N/A					1	mg/L				
24B. Diethyl Phthalate (84-66-2)	X		X	<0.0101	N/A					1	mg/L				
25B. Dimethyl Phthalate (131 -11-3)	X		X	<0.0101	N/A					1	mg/L				
26B. Di-N-Butyl Phthalate (84-74-2)	X		X	<0.0101	N/A					1	mg/L				
27B. 2,4-Dinitrotoluene (121-14-2)	X		X	<0.0101	N/A					1	mg/L				
28B. 2,6-Dinitrotoluene (606-20-2)	X		X	<0.0101	N/A					1	mg/L				
29B. Di-N-Octyl Phthalate (117-84-0)	X		X	<0.0101	N/A					1	mg/L				
30B. 1,2-Diphenylhydrazine (*as Azobenzene*) (122-66-7)	X		X	<0.0101	N/A					1	mg/L				
31B. Fluoranthene (206-44-0)	X		X	<0.0101	N/A					1	mg/L				
32B. Fluorene (86-73-7)	X		X	<0.0101	N/A					1	mg/L				
33B. Hexachlorobenzene (118-74-1)	X		X	<0.0101	N/A					1	mg/L				
34B. Hexachlorobutadiene (87-68-3)	X		X	<0.0101	N/A					1	mg/L				
35B. Hexachlorocyclopentadiene (77-47-4)	X		X	<0.0101	N/A					1	mg/L				
36B Hexachloroethane (67-72-1)	X		X	<0.0101	N/A					1	mg/L				
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)	X		X	<0.0101	N/A					1	mg/L				
38B. Isophorone (78-59-1)	X		X	<0.0101	N/A					1	mg/L				
39B. Naphthalene (91-20-3)	X		X	<0.0101	N/A					1	mg/L				
40B. Nitrobenzene (98-95-3)	X		X	<0.0101	N/A					1	mg/L				
41B. N-Nitrosodimethylamine (62-75-9)	X		X	<0.0101	N/A					1	mg/L				
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X		X	<0.0101	N/A					1	mg/L				

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitrosodiphenylamine (86-30-6)	X		X	<0.0101	N/A					1	mg/L				
44B. Phenanthrene (85-01-8)	X		X	<0.0101	N/A					1	mg/L				
45B. Pyrene (129-00-0)	X		X	<0.0101	N/A					1	mg/L				
46B. 1,2,4-Trichlorobenzene (120-82-1)	X		X	<0.0101	N/A					1	mg/L				
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)	X		X	<0.525	N/A					1	ug/L				
2P. α-BHC (319-84-6)	X		X	<0.525	N/A					1	ug/L				
3P. β-BHC (319-85-7)	X		X	<0.525	N/A					1	ug/L				
4P. γ-BHC (58-89-9)	X		X	<0.525	N/A					1	ug/L				
5P. δ-BHC (319-86-8)	X		X	<0.525	N/A					1	ug/L				
6P. Chlordane (57-74-9)	X		X	<5.25	N/A					1	ug/L				
7P. 4,4'-DDT (50-29-3)	X		X	<0.525	N/A					1	ug/L				
8P. 4,4'-DDE (72-55-9)	X		X	<0.525	N/A					1	ug/L				
9P. 4,4'-DDD (72-54-8)	X		X	<0.525	N/A					1	ug/L				
10P. Dieldrin (60-57-1)	X		X	<0.525	N/A					1	ug/L				
11P. α-Enosulfan (115-29-7)	X		X	<0.525	N/A					1	ug/L				
12P. β-Endosulfan (115-29-7)	X		X	<0.525	N/A					1	ug/L				
13P. Endosulfan Sulfate (1031-07-8)	X		X	<0.525	N/A					1	ug/L				
14P. Endrin (72-20-8)	X		X	<0.525	N/A					1	ug/L				
15P. Endrin Aldehyde (7421-93-4)	X		X	<0.525	N/A					1	ug/L				
16P. Heptachlor (76-44-8)	X		X	<0.525	N/A					1	ug/L				

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
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CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)	X		X	<0.525	N/A					1	ug/L				
18P. PCB-1242 (53469-21-9)	X		X	<0.525	N/A					1	ug/L				
19P. PCB-1254 (11097-69-1)	X		X	<0.525	N/A					1	ug/L				
20P. PCB-1221 (11104-28-2)	X		X	<0.525	N/A					1	ug/L				
21P. PCB-1232 (11141-16-5)	X		X	<0.525	N/A					1	ug/L				
22P. PCB-1248 (12672-29-6)	X		X	<0.525	N/A					1	ug/L				
23P. PCB-1260 (11096-82-5)	X		X	<0.525	N/A					1	ug/L				
24P. PCB-1016 (12674-11-2)	X		X	<0.525	N/A					1	ug/L				
25P. Toxaphene (8001-35-2)	X		X	<5.25	N/A					1	ug/L				

Outfall 006 – Form 2C

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*): VAD005007679

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

OUTFALL NO.: Outfall 006

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT							3. UNITS (*specify if blank*)		4. INTAKE (*optional*)		
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (*BOD*)	5	13.2					1	mg/L				
b. Chemical Oxygen Demand (*COD*)	< 10	N/A					1	mg/L				
c. Total Organic Carbon (*TOC*)	1.04	2.76					1	mg/L				
d. Total Suspended Solids (*TSS*)	< 1	N/A					1	mg/L				
e. Ammonia (*as N*)	< 0.10	N/A					1	mg/L				
f. Flow	VALUE 0.7		VALUE		VALUE		1	mgd		VALUE		
g. Temperature (*winter*)	VALUE 12.8		VALUE 9.6		VALUE 6.4		267	°C		VALUE		
h. Temperature (*summer*)	VALUE 30.6		VALUE 28.8		VALUE 25.8		276	°C		VALUE		
i. pH	MINIMUM 7.03	MAXIMUM	MINIMUM	MAXIMUM				STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual		X												
c. Color		X												
d. Fecal Coliform	X		Marked as believed present due to presence in riverwater.											
e. Fluoride (16984-48-8)		X												
f. Nitrate-Nitrite (*as N*)	X		Marked as believed present due to presence in riverwater.											

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE *(optional)*		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE *(if available)* (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE *(if available)* (2) MASS	c. LONG TERM AVRG. VALUE *(if available)* (1) CONCENTRATION	c. LONG TERM AVRG. VALUE *(if available)* (2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
g. Nitrogen, Total Organic (*as N*)	X		Marked	as believed present			due to presence in		riverwater.					
h. Oil and Grease		X												
i. Phosphorus (as P), Total (7723-14-0)	X		Marked	as believed present			due to presence in		riverwater.					
j. Radioactivity														
(1) Alpha, Total		X												
(2) Beta, Total		X												
(3) Radium, Total		X												
(4) Radium 226, Total		X												
k. Sulfate (*as SO_4*) (14808-79-8)	X		Marked	as believed present			due to presence in		riverwater.					
l. Sulfide (*as S*)		X												
m. Sulfite (*as SO_3*) (14265-45-3)		X												
n. Surfactants		X												
o. Aluminum, Total (7429-90-5)	X		Marked	as believed present			due to presence in		riverwater.					
p. Barium, Total (7440-39-3)	X		Marked	as believed present			due to presence in		riverwater.					
q. Boron, Total (7440-42-8)	X		Marked	as believed present			due to presence in		riverwater.					
r. Cobalt, Total (7440-48-4)		X												
s. Iron, Total (7439-89-6)	X		Marked	as believed present			due to presence in		riverwater.					
t. Magnesium, Total (7439-95-4)	X		Marked	as believed present			due to presence in		riverwater.					
u. Molybdenum, Total (7439-98-7)		X												
v. Manganese, Total (7439-96-5)	X		Marked	as believed present			due to presence in		riverwater.					
w. Tin, Total (7440-31-5)		X												
x. Titanium, Total (7440-32-6)		X												

CONTINUE ON PAGE V-3

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
VAD005007679	Outfall 006

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)			X												
2M. Arsenic, Total (7440-38-2)			X												
3M. Beryllium, Total (7440-41-7)			X												
4M. Cadmium, Total (7440-43-9)			X												
5M. Chromium, Total (7440-47-3)			X												
6M. Copper, Total (7440-50-8)			X												
7M. Lead, Total (7439-92-1)			X												
8M. Mercury, Total (7439-97-6)			X												
9M. Nickel, Total (7440-02-0)			X												
10M. Selenium, Total (7782-49-2)			X												
11M. Silver, Total (7440-22-4)			X												
12M. Thallium, Total (7440-28-0)			X												
13M. Zinc, Total (7440-66-6)			X												
14M. Cyanide, Total (57-12-5)			X												
15M. Phenols, Total			X												
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)			X												
2V. Acrylonitrile (107-13-1)			X												
3V. Benzene (71-43-2)			X												
4V. Bis (*Chloromethyl*) Ether (542-88-1)				***DELISTED***	***02-4-81***	ANALYSIS	NOT	REQUIRED	FOR	THIS					
5V. Bromoform (75-25-2)			X												
6V. Carbon Tetrachloride (56-23-5)			X												
7V. Chlorobenzene (108-90-7)			X												
8V. Chlorodibromomethane (124-48-1)			X												
9V. Chloroethane (75-00-3)			X												
10V. 2-Chloroethylvinyl Ether (110-75-8)			X												
11V. Chloroform (67-66-3)			X												
12V. Dichlorobromomethane (75-27-4)			X												
13V. Dichlorodifluoromethane (75-71-8)				***DELISTED***	***01-8-81***	ANALYSIS	NOT	REQUIRED	FOR	THIS					
14V. 1,1-Dichloroethane (75-34-3)			X												
15V. 1,2-Dichloroethane (107-06-2)			X												
16V. 1,1-Dichloroethylene (75-35-4)			X												
17V. 1,2-Dichloropropane (78-87-5)			X												
18V. 1,3-Dichloropropylene (542-75-6)			X												
19V. Ethylbenzene (100-41-4)			X												
20V. Methyl Bromide (74-83-9)			X												
21V. Methyl Chloride (74-87-3)			X												

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)			X												
23V. 1,1,2,2-Tetrachloroethane (79-34-5)			X												
24V. Tetrachloroethylene (127-18-4)			X												
25V. Toluene (108-88-3)			X												
26V. 1,2-Trans-Dichloroethylene (156-60-5)			X												
27V. 1,1,1-Trichloroethane (71-55-6)			X												
28V. 1,1,2-Trichloroethane (79-00-5)			X												
29V Trichloroethylene (79-01-6)			X												
30V. Trichlorofluoromethane (75-69-4)				***DELISTED***	***01-8-81***	ANALYSIS	NOT	REQUIRED	FOR	THIS					
31V. Vinyl Chloride (75-01-4)			X												
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)			X												
2A. 2,4-Dichlorophenol (120-83-2)			X												
3A. 2,4-Dimethylphenol (105-67-9)			X												
4A. 4,6-Dinitro-O-Cresol (534-52-1)			X												
5A. 2,4-Dinitrophenol (51-28-5)			X												
6A. 2-Nitrophenol (88-75-5)			X												
7A. 4-Nitrophenol (100-02-7)			X												
8A. P-Chloro-M-Cresol (59-50-7)			X												
9A. Pentachlorophenol (87-86-5)			X												
10A. Phenol (108-95-2)			X												
11A. 2,4,6-Trichlorophenol (88-05-2)			X												

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)			X												
2B. Acenaphtylene (208-96-8)			X												
3B. Anthracene (120-12-7)			X												
4B. Benzidine (92-87-5)			X												
5B. Benzo (*a*) Anthracene (56-55-3)			X												
6B. Benzo (*a*) Pyrene (50-32-8)			X												
7B. 3,4-Benzo-fluoranthene (205-99-2)			X												
8B. Benzo (*ghi*) Perylene (191-24-2)			X												
9B. Benzo (*k*) Fluoranthene (207-08-9)			X												
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)			X												
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)			X												
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)			X												
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)			X												
14B. 4-Bromophenyl Phenyl Ether (101-55-3)			X												
15B. Butyl Benzyl Phthalate (85-68-7)			X												
16B. 2-Chloro-naphthalene (91-58-7)			X												
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)			X												
18B. Chrysene (218-01-9)			X												
19B. Dibenzo (*a,h*) Anthracene (53-70-3)			X												
20B. 1,2-Dichloro-benzene (95-50-1)			X												
21B. 1,3-Di-chloro-benzene (541-73-1)			X												

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichloro-benzene (106-46-7)			X												
23B. 3,3-Dichloro-benzidine (91-94-1)			X												
24B. Diethyl Phthalate (84-66-2)			X												
25B. Dimethyl Phthalate (131 -11-3)			X												
26B. Di-N-Butyl Phthalate (84-74-2)			X												
27B. 2,4-Dinitro-toluene (121-14-2)			X												
28B. 2,6-Dinitro-toluene (606-20-2)			X												
29B. Di-N-Octyl Phthalate (117-84-0)			X												
30B. 1,2-Diphenyl-hydrazine (*as Azo-benzene*) (122-66-7)			X												
31B. Fluoranthene (206-44-0)			X												
32B. Fluorene (86-73-7)			X												
33B. Hexachloro-benzene (118-74-1)			X												
34B. Hexachloro-butadiene (87-68-3)			X												
35B. Hexachloro-cyclopentadiene (77-47-4)			X												
36B Hexachloro-ethane (67-72-1)			X												
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)			X												
38B. Isophorone (78-59-1)			X												
39B. Naphthalene (91-20-3)			X												
40B. Nitrobenzene (98-95-3)			X												
41B. N-Nitro-sodimethylamine (62-75-9)			X												
42B. N-Nitrosodi-N-Propylamine (621-64-7)			X												

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitrosodiphenylamine (86-30-6)			X												
44B. Phenanthrene (85-01-8)			X												
45B. Pyrene (129-00-0)			X												
46B. 1,2,4-Trichlorobenzene (120-82-1)			X												
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'-DDT (50-29-3)			X												
8P. 4,4'-DDE (72-55-9)			X												
9P. 4,4'-DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Enosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
VAD005007679	Outfall 006

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X												
19P. PCB-1254 (11097-69-1)			X												
20P. PCB-1221 (11104-28-2)			X												
21P. PCB-1232 (11141-16-5)			X												
22P. PCB-1248 (12672-29-6)			X												
23P. PCB-1260 (11096-82-5)			X												
24P. PCB-1016 (12674-11-2)			X												
25P. Toxaphene (8001-35-2)			X												

Appendix C
Form 2F for Outfalls 005, 501, 502, 503, 008, 105, 107 and 111

Please print or type in the unshaded areas only.

EPA ID Number (*copy from Item 1 of Form 1*)
VAD005007679

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

FORM 2F NPDES

U.S. Environmental Protection Agency
Washington, DC 20460

Application for Permit to Discharge Storm Water Discharges Associated with Industrial Activity

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 28.6 hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of this collection of information, or suggestions for improving this form, including suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460, or Director, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

I. Outfall Location

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. Outfall Number (*list*)	B. Latitude			C. Longitude			D. Receiving Water (*name*)
005	37	20	56	80	44	52	New River
501	37	20	58	80	44	54	New River
502	37	21	02	80	44	56	New River
503	37	20	59	80	45	07	New River
008	37	20	51	80	46	00	New River
108-111	37	20	36	80	46	02	New River

II. Improvements

A. Are you now required by any Federal, State, or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

1. Identification of Conditions, Agreements, Etc.	2. Affected Outfalls		3. Brief Description of Project	4. Final Compliance Date	
	number	source of discharge		a. req.	b. proj.
None.					

B: You may attach additional sheets describing any additional water pollution (or other environmental projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction.

III. Site Drainage Map

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfalls(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage of disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which received storm water discharges from the facility. See drainage maps provided in Appendix F.

Continue on Page 2

Continued from the Front

IV. Narrative Description of Pollutant Sources

A. For each outfall, provide an estimate of the area (include units) of imperious surfaces (including paved areas and building roofs) drained to the outfall, and an estimate of the total surface area drained by the outfall.

Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)	Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)
005	0 acres	207 acres	008	6.9 acres	170 acres
501	0 acres	13 acres	105	0.2 acres	0.45 acres
502	0 acres	8.3 acres	107	0.02 acres	0.4 acres
503	0 acres	4.5 acres	108-111	0.8 acres	0.8 acres

B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with storm water runoff; materials loading and access areas, and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

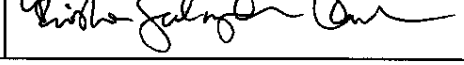
Significant materials used on site include coal, process solids, coal ash (fly ash), cellulose acetate flake, general plant trash, and dewatered sludge from wastewater treatment. Drainage from coal storage goes to the sedimentation ponds for Utilities Outfall 001 (VA0092291). Process solids, fly ash, and wastewater treatment sludge is transported to an on-site landfill for disposal. Erosion and sedimentation controls, including sedimentation ponds, are used at the landfill area to control runoff to Outfall 005. Collection and treatment of storm water from major areas of industrial activity, including landfill leachate, is provided prior to discharge through Outfall 003. Material management practices affecting all outfalls include: covering and/or providing secondary containment of materials used at the site; general housekeeping practices; spill control, cleanup and reporting procedures, and erosion control practices. These practices are outlined in detail in the site Storm Water Pollution Prevention Plan. Pesticides, herbicides, and soil conditioners are used throughout the plant site in accordance with manufacturer's recommendations. A list of materials exposed to storm water runoff and their use at the facility are provided in Appendix G.

C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall Number	Treatment	List Codes from Table 2F-1
005,501, 502 & 503	Storm water pollution prevention measures including housekeeping and erosion control including silt fences and check dams. Treatment: Sedimentation, Discharge to surface water	1-U, 4-A
008	Storm water pollution prevention measures including housekeeping and erosion control such as silt fences. Treatment: Discharge to surface water	4-A
111, 105, 107	Storm water pollution prevention measures including housekeeping such as regular roadway cleaning and impervious covers (105 and 107). Treatment: Discharge to surface water	4-A

V. Nonstormwater Discharges

A. I certify under penalty of law hat the outfall(s) covered by this application have been tested or evaluated for the presence of nonstormwater discharges, and that all nonstormwater discharged from these outfall(s) are identified in either an accompanying Form 2C or From 2E application for the outfall.

Name and Official Title (type or print)	Signature	Date Signed
Kristina Geelmuyden Karlsson Site Director		01.07.2013

B. Provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test.

The facility's storm water outfalls have been evaluated for the presence of non-storm water flow using knowledge of plant processes, review of sewer schematics, and visual inspection of the outfalls. As a result of the investigation, non-storm water is believed to be absent from the facility's storm water outfalls, except Outfall 005 which has some groundwater flow. This dry weather flow is monitored for ammonia, pH and temperature under the current permit and was tested on July 18, 2012, for a larger set of parameters. The results of the recent testing are shown in Form 2C for Outfall 005.

VI. Significant Leaks or Spills

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

See list in Appendix H of any significant spills that have occurred at the Celanese facility site in the past 3 years.

EPA ID Number *(copy from Item 1 of Form 1)*
VAD005007679

VII. Discharge Information

A, B, C, & D: See instructions before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided. Table VII-A, VII-B, VII-C are included on separate sheets numbers VII-1 and VII-2.

E. Potential discharges not covered by analysis – is any toxic pollutant listed in table 2F-2, 2F-3, or 2F-4, a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ Yes (*list all such pollutants below*) ☑ No (*go to Section IX*)

VIII. Biological Toxicity Testing Data

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ Yes (*list all such pollutants below*) ☑ No (*go to Section IX*)

IX. Contract Analysis Information

Were any of the analyses reported in Item VII performed by a contract laboratory or consulting firm?

☑ Yes (*list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below*) ☐ No (*go to Section X*)

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed
Research Environmental & Industrial Consultants, Inc. (REIC)	225 Industrial Park Road Beaver, WV, 25313	304-225-2500	All parameters except as noted below. Also performed the toxicity testing.
Celanese Acetate, LLC	3520 Virginia Avenue Narrows, VA, 24124	540-921-1111	Temperature, pH, and ammonia at Outfall 005.

X. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name & Official Title (*Type Or Print*)	B. Area Code and Phone No.
Kristina Geelmuyden Karlsson - Site Director	(540) 921-1111
C. Signature	D. Date Signed
	12.17.2012

Outfall 008 – Form 2F

EPA ID Number (*copy from Item 1 of Form 1*)
VAD005007679

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	< 5.0 mg/L	N/A			1	Equipment fuel & oil residuals.
Biological Oxygen Demand (BOD5)	6 mg/L	5 mg/L			1	Onsite & waste material residuals.
Chemical Oxygen Demand (COD)	28 mg/L	29 mg/L			1	Onsite & waste material residuals.
Total Suspended Solids (TSS)	44 mg/L	21 mg/L			1	Sediment from storm water runoff.
Total Nitrogen	0.75 mg/L	0.75 mg/L			1	Fertilizers and material residuals.
Total Phosphorus	0.12 mg/L	0.24 mg/L			1	Fertilizers and material residuals.
pH	Minimum 7.13	Maximum	Minimum	Maximum	1	

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Color	60 CU	60 CU			1	Soil & naturally occurring material.
Fluoride (16984-48-8)	0.21 mg/L	<0.20 mg/L			1	Naturally occurring materials.
Nitrate-Nitrite	1.41 mg/L as N	1.75 mg/L as N			1	Fertilizers & material residuals
Sulfate (14808-79-8)	12.6 mg/L	10.7 mg/L			1	Naturally occurring materials.
Aluminum (7429-90-5)	0.840 mg/L	0.744 mg/L			1	Naturally occurring metals in soil.
Barium (7440-39-3)	< 0.100 mg/L	< 0.100 mg/L			1	Not detected.
Boron (7440-42-8)	< 0.100 mg/L	< 0.100 mg/L			1	Not detected.
Iron (7439-89-6)	0.843 mg/L	0.842 mg/L			1	Naturally occurring metals in soil.
Magnesium (7439-95-4)	4.21 mg/L	4.07 mg/L			1	Naturally occurring materials.
Manganese (7439-96-5)	0.105 mg/L	< 0.100 mg/L			1	Naturally occurring metals in soil.
Arsenic (7440-38-2)	< 0.200 mg/L	< 0.200 mg/L			1	Not detected.
Ammonia	< 0.10 mg/L	< 0.10 mg/L			1	Not detected.
Copper (7440-50-8)	< 0.100 mg/L	< 0.100 mg/L			1	Not detected.
Lead (7439-92-1)	< 0.200 mg/L	< 0.200 mg/L			1	Not detected.
Selenium (7782-49-2)	< 0.200 mg/L	< 0.200 mg/L			1	Not detected.
Zinc (7440-66-6)	< 0.050 mg/L	< 0.050 mg/L			1	Not detected.
Methylene Chloride (75-09-2)	< 1.0 ug/L	< 1.0 ug/L			1	Not detected.

Continued from the Front

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*
7-10-2012	110 minutes	0.29 inches	> 72 hours	15 gpm (approximate)	1,055 gallons

7. Provide a description of the method of flow measurement or estimate.

Visual estimate.

Outfall 105 – Form 2F

Storm drain is covered to prevent discharges. See application for details.

EPA ID Number (*copy from Item 1 of Form 1*)
VAD005007679

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	Not measured	N/A			0	Drain covered to prevent discharges
Biological Oxygen Demand (BOD5)	Not measured	Not measured			0	Drain covered to prevent discharges
Chemical Oxygen Demand (COD)	Not measured	Not measured			0	Drain covered to prevent discharges
Total Suspended Solids (TSS)	1,577 mg/L	Not measured			1	Last collected data on 4/1/2009.
Total Nitrogen	Not measured	Not measured			0	Drain covered to prevent discharges
Total Phosphorus	Not measured	Not measured			0	Drain covered to prevent discharges
pH	Minimum NM	Maximum NM	Minimum	Maximum	0	Drain covered to prevent discharges

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		

 Continue on Reverse

Continued from the Front

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*
4/1/2009	Not recorded	Not recorded	Not recorded	1 gpm (approximate)	Not recorded

7. Provide a description of the method of flow measurement or estimate.

Visual estimate.

Outfall 107 – Form 2F

Storm drain is covered to prevent discharges. See application for details.

EPA ID Number (*copy from Item 1 of Form 1*)
VAD005007679

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number (*if available*)	Maximum Values (*include units*)		Average Values (*include units*)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	Not measured	N/A			0	Drain covered to prevent discharges
Biological Oxygen Demand (BOD5)	Not measured	Not measured			0	Drain covered to prevent discharges
Chemical Oxygen Demand (COD)	Not measured	Not measured			0	Drain covered to prevent discharges
Total Suspended Solids (TSS)	360 mg/L	Not measured			1	Last collected data on 4/1/2009.
Total Nitrogen	Not measured	Not measured			0	Drain covered to prevent discharges
Total Phosphorus	Not measured	Not measured			0	Drain covered to prevent discharges
pH	Minimum NM	Maximum NM	Minimum	Maximum	0	Drain covered to prevent discharges

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (*if available*)	Maximum Values (*include units*)		Average Values (*include units*)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		

Continue on Reverse

Continued from the Front

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*
4/1/2009	Not recorded	Not recorded	Not recorded	0.07 gpm (approximate)	Not recorded

7. Provide a description of the method of flow measurement or estimate.

Calculated based on the amount of sample collected over a given time.

Outfall 108 – Form 2F

EPA ID Number (*copy from Item 1 of Form 1*)
VAD005007679

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge Information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease		N/A				
Biological Oxygen Demand (BOD5)	Outfall 111 measured as the representative outfall for Outfalls					
Chemical Oxygen Demand (COD)	108, 109, and 110. Results shown in Outfall 111 - Form 2F.					
Total Suspended Solids (TSS)						
Total Nitrogen						
Total Phosphorus						
pH	Minimum	Maximum	Minimum	Maximum		

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		

Continue on Reverse

Continued from the Front

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*

7. Provide a description of the method of flow measurement or estimate.

Outfall 109 – Form 2F

EPA ID Number (*copy from Item 1 of Form 1*)
VAD005007679

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease		N/A				
Biological Oxygen Demand (BOD5)	Outfall 111	measured	as the	representative	outfall	for Outfalls
Chemical Oxygen Demand (COD)	108, 109,	and 110.	Results	shown in Outfall		111 - Form 2F.
Total Suspended Solids (TSS)						
Total Nitrogen						
Total Phosphorus						
pH	Minimum	Maximum	Minimum	Maximum		

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		

Continue on Reverse

Continued from the Front

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*

7. Provide a description of the method of flow measurement or estimate.

Outfall 110 – Form 2F

EPA ID Number (*copy from Item 1 of Form 1*)
VAD005007679

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number (*if available*)	Maximum Values (*include units*)		Average Values (*include units*)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease		N/A				
Biological Oxygen Demand (BOD5)	Outfall 111 measured as the representative outfall for Outfalls					
Chemical Oxygen Demand (COD)	108, 109, and 110. Results shown in Outfall 111 - Form 2F.					
Total Suspended Solids (TSS)						
Total Nitrogen						
Total Phosphorus						
pH	Minimum	Maximum	Minimum	Maximum		

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (*if available*)	Maximum Values (*include units*)		Average Values (*include units*)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		

Continue on Reverse

Continued from the Front

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*

7. Provide a description of the method of flow measurement or estimate.

Outfall 111 – Form 2F

EPA ID Number (*copy from Item 1 of Form 1*)
VAD005007679

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	< 5.0 mg/L	N/A			1	Equipment fuel & oil residuals.
Biological Oxygen Demand (BOD5)	2 mg/L	4 mg/L			1	Onsite & waste material residuals.
Chemical Oxygen Demand (COD)	22 mg/L	30 mg/L			1	Onsite & waste material residuals.
Total Suspended Solids (TSS)	10 mg/L	14 mg/L			1	Sediment from storm water runoff.
Total Nitrogen	0.70 mg/L	0.95 mg/L			1	Fertilizers and material residuals.
Total Phosphorus	0.43 mg/L	0.44 mg/L			1	Fertilizers and material residuals.
pH	Minimum 6.72	Maximum	Minimum	Maximum	1	

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Color	25 CU	45 CU			1	Soil Residuals.
Ammonia	< 0.10 mg/L	0.13 mg/L			1	Fertilizers & material residuals.
Nitrate-Nitrite	0.74 mg/L as N	0.82 mg/L as N			1	Fertilizers & material residuals.
Sulfate (14808-79-8)	8.38 mg/L	15.4 mg/L			1	Naturally occurring materials.
Aluminum (7429-90-5)	0.226 mg/L	0.312 mg/L			1	Naturally occurring metals in soil.
Barium (7440-39-3)	< 0.100 mg/L	< 0.100 mg/L			1	Not detected.
Boron (7440-42-8)	< 0.100 mg/L	< 0.100 mg/L			1	Not detected.
Iron (7439-89-6)	0.222 mg/L	0.390 mg/L			1	Naturally occurring metals in soil.
Magnesium (7439-95-4)	1.88 mg/L	2.24 mg/L			1	Naturally occurring materials.
Manganese (7439-96-5)	< 0.100 mg/L	<0.100 mg/L			1	Not detected.

Continued from the Front

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*
08-05-2012	35 minutes	0.52	> 72 hours	6 gpm (approximate)	140 gallons

7. Provide a description of the method of flow measurement or estimate.

Visual estimate.

Outfall 005 – Form 2F

Form not included because of the inability to obtain a sample during a representative rainfall event due to the remote location of the outfall.

EPA ID Number (*copy from Item 1 of Form 1*)
VAD005007679

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	< 5.0 mg/L	N/A			1	Equipment fuel & oil residuals.
Biological Oxygen Demand (BOD5)	17 mg/L	4 mg/L			1	Onsite & waste material residuals.
Chemical Oxygen Demand (COD)	10 mg/L	10 mg/L			1	Onsite & waste material residuals.
Total Suspended Solids (TSS)	5 mg/L	5 mg/L			1	Sediment from storm water runoff.
Total Nitrogen	7.55 mg/L	7.58 mg/L			1	Fertilizers and material residuals.
Total Phosphorus	1.10 mg/L	1.03 mg/L			1	Fertilizers and material residuals.
pH	Minimum 7.7	Maximum	Minimum	Maximum	1	

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Color	10 CU	15 CU			1	Soil & naturally occurring material.
Ammonia	5.58 mg/L	5.63 mg/L			1	Fertilizers & material residuals.
Nitrate-Nitrite	3.25 mg/L as N	3.25 mg/L as N			1	Fertilizers & material residuals.
Sulfate (14808-79-8)	11.1 mg/L	10.8 mg/L			1	Naturally occurring materials.
Aluminum (7429-90-5)	0.106 mg/L	< 0.100 mg/L			1	Naturally occurring metals in soil.
Barium (7440-39-3)	0.842 mg/L	0.867 mg/L			1	Naturally occurring metals in soil.
Boron (7440-42-8)	1.10 mg/L	1.12 mg/L			1	Naturally occurring metals in soil.
Iron (7439-89-6)	0.242 mg/L	0.222 mg/L			1	Naturally occurring metals in soil.
Magnesium (7439-95-4)	44.9 mg/L	46.1 mg/L			1	Naturally occurring materials.
Manganese (7439-96-5)	0.527 mg/L	0.551 mg/L			1	Naturally occurring metals in soil.
Zinc (7440-66-6)	< 0.050 mg/L	< 0.050 mg/L			1	Not detected.
Fluoride (16984-48-8)	< 0.20 mg/L	< 0.20 mg/L			1	Not detected.
Methylene Chloride (75-09-2)	< 1.0 ug/L				1	Not detected.

Continued from the Front

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*
01-14-2013	100 minutes	0.22 inches	> 72 hours	20 gpm	2,000 gallons

7. Provide a description of the method of flow measurement or estimate.

Visual estimate. Please note that Outfall 005 does have continuous dry weather flow that combines with the stormwater. It is not possible to measure the two flows separately.

Outfall 501 – Form 2F

EPA ID Number (*copy from Item 1 of Form 1*)
VAD005007679

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VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	< 5.0 mg/L	N/A			1	Equipment fuel & oil residuals.
Biological Oxygen Demand (BOD5)	< 2 mg/L	< 2 mg/L			1	Not detected.
Chemical Oxygen Demand (COD)	< 10 mg/L	< 10 mg/L			1	Not detected.
Total Suspended Solids (TSS)	12 mg/L	6 mg/L			1	Sediment from storm water runoff.
Total Nitrogen	<0.50 mg/L	<0.50 mg/L			1	Fertilizers and material residuals.
Total Phosphorus	0.40 mg/L	0.31 mg/L			1	Fertilizers and material residuals.
pH	Minimum 7.51	Maximum	Minimum	Maximum	1	

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Color	20 CU	15 CU			1	Soil Residuals.
Ammonia	< 0.10 mg/L	< 0.10 mg/L			1	Not detected.
Nitrate-Nitrite	4.20 mg/L as N	4.15 mg/L as N			1	Fertilizers & material residuals.
Sulfate (14808-79-8)	99.5 mg/L	89.1 mg/L			1	Naturally occurring materials.
Aluminum (7429-90-5)	0.258 mg/L	0.163 mg/L			1	Naturally occurring metals in soil.
Barium (7440-39-3)	< 0.100 mg/L	< 0.100 mg/L			1	Not detected.
Boron (7440-42-8)	0.130 mg/L	0.128 mg/L			1	Naturally occurring materials.
Iron (7439-89-6)	0.167 mg/L	0.520 mg/L			1	Naturally occurring metals in soil.
Magnesium (7439-95-4)	26.8 mg/L	26.3 mg/L			1	Naturally occurring materials.
Manganese (7439-96-5)	< 0.100 mg/L	<0.100 mg/L			1	Not detected.
Zinc (7440-66-6)	< 0.050 mg/L	< 0.050 mg/L			1	Not detected.
Fluoride (16984-48-8)	< 0.20 mg/L	< 0.20 mg/L			1	Not detected.

Continued from the Front

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*
10-29-2012	785 min	0.52 inches	> 72 hours	1 gpm	44 gallons

7. Provide a description of the method of flow measurement or estimate.

Visual estimate.

Outfall 502 – Form 2F

Form not included because of the inability to obtain a sample during a representative rainfall event due to recent changes in the topography of the landfill and lack of storm flow generation. See application for details.

Outfall 503 – Form 2F

EPA ID Number (*copy from Item 1 of Form 1*)
VAD005007679

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	< 5.0 mg/L	N/A			1	Equipment fuel & oil residuals.
Biological Oxygen Demand (BOD5)	No data	No Data			1	Sample exceeded hold time for test.
Chemical Oxygen Demand (COD)	28 mg/L	32 mg/L			1	Onsite & waste material residuals.
Total Suspended Solids (TSS)	6 mg/L	4 mg/L			1	Sediment from storm water runoff.
Total Nitrogen	1.46 mg/L	<0.50 mg/L			1	Fertilizers and material residuals.
Total Phosphorus	0.54 mg/L	0.48 mg/L			1	Fertilizers and material residuals.
pH	Minimum 7.25	Maximum	Minimum	Maximum	1	

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Color	No data	No data			1	Sample exceeded hold time for test.
Ammonia	< 0.10 mg/L	< 0.10 mg/L			1	Fertilizers & material residuals.
Nitrate-Nitrite	1.87 mg/L as N	1.57 mg/L as N			1	Fertilizers & material residuals.
Sulfate (14808-79-8)	6.26 mg/L	8.61 mg/L			1	Naturally occurring materials.
Aluminum (7429-90-5)	0.291 mg/L	0.219 mg/L			1	Naturally occurring metals in soil.
Barium (7440-39-3)	< 0.100 mg/L	< 0.100 mg/L			1	Not detected.
Boron (7440-42-8)	< 0.100 mg/L	< 0.100 mg/L			1	Not detected.
Iron (7439-89-6)	0.165 mg/L	0.126 mg/L			1	Naturally occurring metals in soil.
Magnesium (7439-95-4)	5.37 mg/L	5.88 mg/L			1	Naturally occurring materials.
Manganese (7439-96-5)	< 0.100 mg/L	<0.100 mg/L			1	Not detected.
Zinc (7440-66-6)	< 0.050 mg/L	< 0.050 mg/L			1	Not detected.
Fluoride (16984-48-8)	< 0.20 mg/L	< 0.20 mg/L			1	Not detected.

Continued from the Front

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*
09-18-2012	>125 minutes (time recorded only when runoff was generated)	2.75 inches	4 hours (prior rain event did not generate runoff)	5 gpm	430 gallons

7. Provide a description of the method of flow measurement or estimate.

Visual estimate.

Appendix D
Attachment A for Outfalls 001 and 003

Celanese Acetate LLC
VA0000299
Outfall 001

ATTACHMENT A
DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY CRITERIA MONITORING

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL	REPORTING RESULTS	SAMPLE TYPE	SAMPLE FREQUENCY
	METALS					
7440-50-8	Copper, dissolved	E200.7	5 µg/L	ND	C	1/5 YR
	RADIONUCLIDES					
	Strontium 90 (pCi/L)	ASTM D 5811-95		0.240 +/- 0.764	C	1/5 YR
	Tritium (pCi/L)	E906.0		-111 +/- 139	C	1/5 YR
	Beta Particle & Photon Activity (pCi/L)	E900.0		0.631 +/- 0.851	C	1/5 YR
	Gross Alpha Particle Activity (pCi/L)	E900.0		0.269 +/- 0.903	C	1/5 YR
	MISCELLANEOUS					
	Ammonia as NH3-N	E350.1	200 µg/L	ND	C	1/5 YR
16887-00-6	Chlorides	E300.0	1.0 mg/L	5.32 mg/L	C	1/5 YR

Kristina Geelmuyden Karlsson / Site Director
Name of Principal Exec. Officer or Authorized Agent/Title

12.17.2012
Signature of Principal Officer or Authorized Agent/Date

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the infromation submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant pernalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See U.S.C. Sec. 1001 and 33 U.S.C. Sec. 1319. (Penalties under these statutesmay include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years).

Celanese Acetate LLC
VA0000299
Outfall 003

ATTACHMENT A
DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY CRITERIA MONITORING

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL	REPORTING RESULTS	SAMPLE TYPE	SAMPLE FREQUENCY
	RADIONUCLIDES					
	Strontium 90 (pCi/L)	ASTM D5811-95		0.392 +/- 0.735	C	1/5 YR
	Tritium (pCi/L)	E906.0		-84.9 +/- 141	C	1/5 YR
	Beta Particle & Photon Activity (pCi/L)	E900.0		6.92 +/- 4.53	C	1/5 YR
	Gross Alpha Particle Activity (pCi/L)	SM 7110C		-0.0640 +/- 1.24	C	1/5 YR
	MISCELLANEOUS					
16887-00-6	Chlorides	E300.0	1.0 mg/L	79.5 mg/L	C	1/5 YR

Kristina Gaelmuyden Karlsson / Site Director
Name of Principal Exec. Officer or Authorized Agent/Title

12.17.2012
Signature of Principal Officer or Authorized Agent/Date

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the infromation submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See U.S.C. Sec. 1001 and 33 U.S.C. Sec. 1319. (Penalties under these statutesmay include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years).

Appendix E
Toxicity Testing Data

Appendix E-1
Summary of Acute Toxicity Results for Outfall 001
Celanese Acetate, LLC, Narrows, Virginia

Test Date	Test Organism	LC_{50} (%)	% Survival in 100% Effluent	Testing Laboratory
June 2009	*C. dubia*	>100	100	VPI – Biology Dept
	P. promelas	>100	100	VPI – Biology Dept
May 2010	*C. dubia*	>100	100	VPI – Biology Dept
	P. promelas	>100	97.5	VPI – Biology Dept
June 2011	*C. dubia*	>100	100	REIC, Inc.
	P. promelas	>100	100	REIC, Inc.
June 2012	*C. dubia*	>100	100	REIC, Inc.
	P. promelas	>100	95	REIC, Inc.

1. Tests were conducted from 12.5% to 95% effluent.

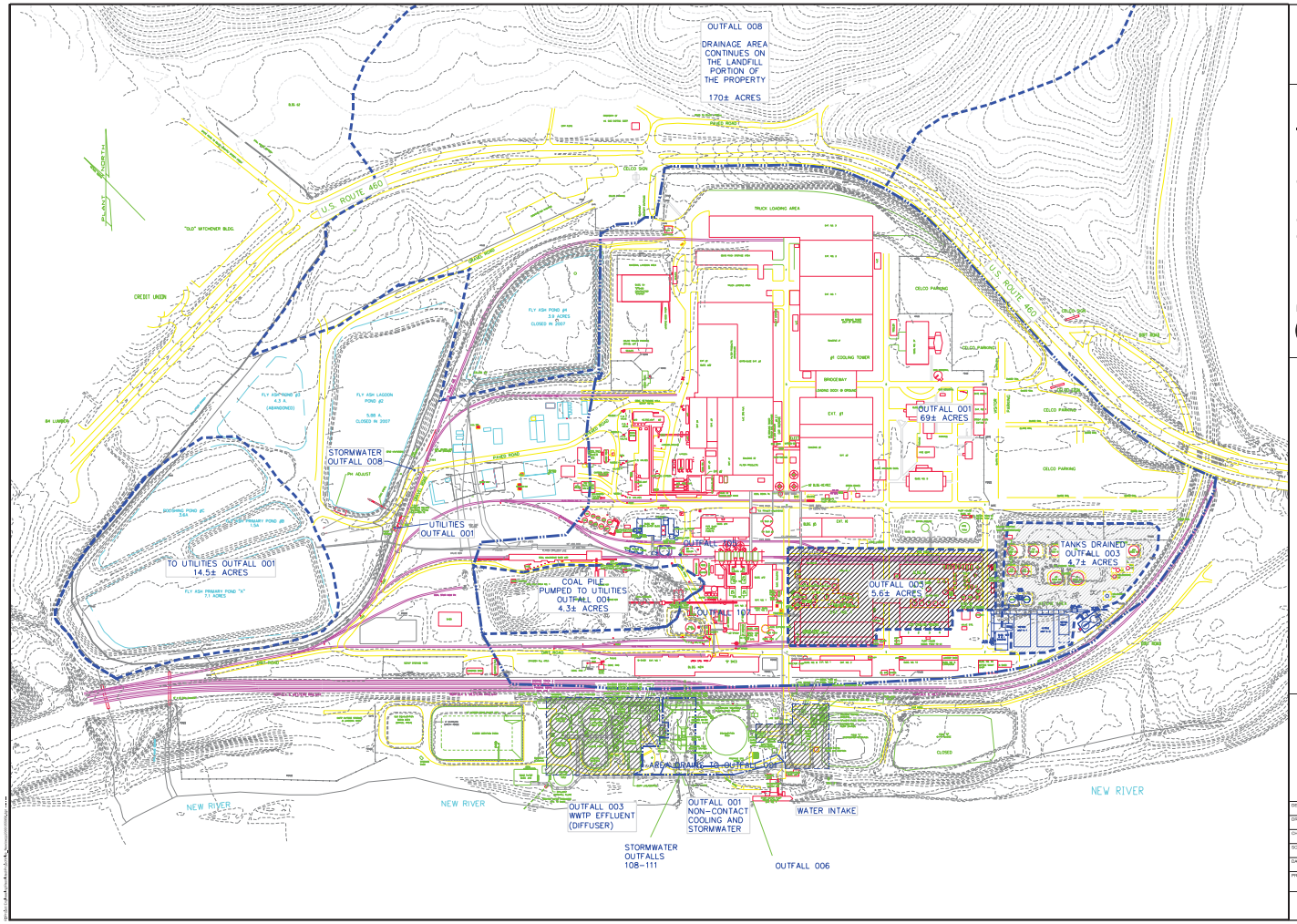
Appendix E-2
Summary of Chronic Toxicity Results for Outfall 001
Celanese Acetate, LLC, Narrows, Virginia

Test Date	Test Organism	NOEC % Survival	NOEC % Rpro-Grth	% Survival in 100% effluent	Testing Laboratory
June 2009	*C. dubia*	100	100	100	VPI – Biology Dept
May 2010	*P. promelas*	100	100	100	VPI – Biology Dept
June 2011	*C. dubia*	100	100	100	REIC, Inc.
June 2012	*C. dubia*	100	100	90	REIC, Inc.

Appendix E-3
Summary of Acute Toxicity Results for Outfall 003
Celanese Acetate, LLC, Narrows, Virginia

Test Date	Test Organism	LC_{50} (%)	TU_a	% Survival in 100% effluent	Testing Laboratory
July 2009	*C. dubia*	44	2.3	0	VPI – Biology Dept
November 2009	*C. dubia*	71	1.4	5	VPI – Biology Dept
March 2010	*C. dubia*	73.8	1.4	15	VPI – Biology Dept
May 2010	*C. dubia*	59.5	1.7	0	VPI – Biology Dept
August 2010	*C. dubia*	86.3	1.2	40	VPI – Biology Dept
November 2010	*C. dubia*		2.1		REIC, Inc.
February 2011	*C. dubia*	64.2	1.6	10	REIC, Inc.
June 2011	*C. dubia*	32.2	3.1	5	REIC, Inc.
August 2011	*C. dubia*	88.8	1.1	40	REIC, Inc.
November 2011	*C. dubia*	50.0	2.0	0	REIC, Inc.
March 2012	*C. dubia*	49.0	2.0	0	REIC, Inc.
May 2012	*C. dubia*	52.5	1.9	20	REIC, Inc.

Appendix F
Drainage Maps



Draper Aden Associates
Engineering • Surveying • Environmental Services
Blacksburg, VA
2206 South Main Street
Blacksburg, VA 24060
540-552-0444 Fax: 540-552-0291
www.draperaden.com
Richmond, VA
Charlottesville, VA
Hampton Roads, VA

PLANT - DRAINAGE AREAS, INTAKE & OUTFALLS
CELCO NARROWS PLANT
NARROWS, VIRGINIA

REVISIONS

DESIGNED BY:
DRAWN BY: SAEJFF
CHECKED BY: CSM
SCALE: 1" = 150'
DATE: DECEMBER 18, 2007
PROJECT NUMBER: B07153-01

3

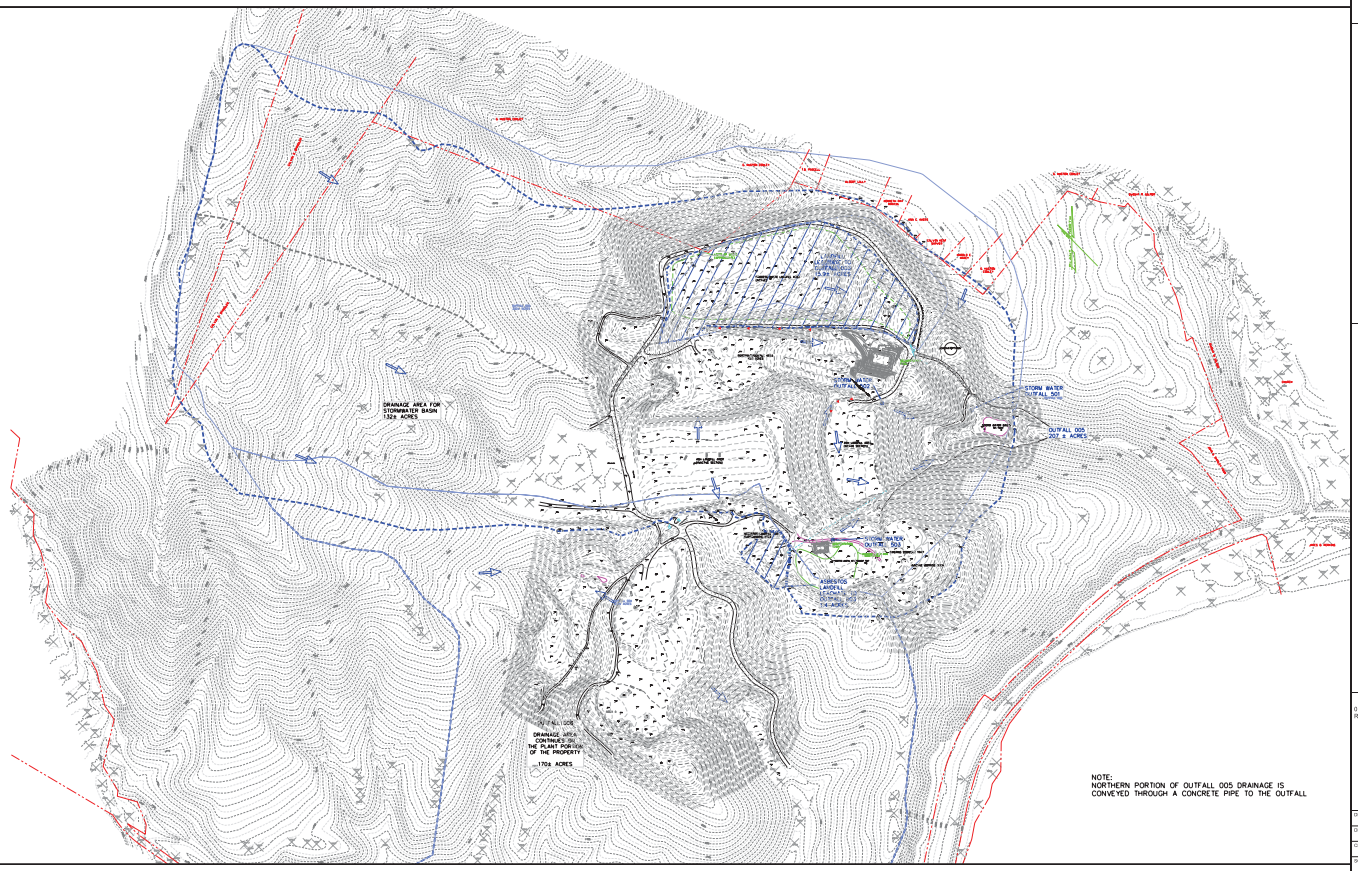
REV. NO.	GRD	WO OR EST. NO.	REVISIONS	DRWN	CHKD	APPVD	APPVD	APPVD	APPVD	DATE
1			REVISED PER MARKUP	MTB	SM					8/29/12

DWG NO | REFERENCE DRAWINGS

Celanese Acetate
CELCO PLANT
NARROWS, VIRGINIA

RFA/WO		SCALE: 1"=150'	PLANT GEN.
DRWN: DAA	DATE: 12/19/07	PLOT SCALE: 1=1	
CHKD	DATE	APPVD	DATE
APPVD	DATE	APPVD	DATE
APPVD	DATE	APPVD	DATE

PLOT PLANS
PLANT - DRAINAGE AREAS, INTAKE & OUTFALLS STORMWATER POLLUTION PREVENTION PLAN
ENG MANAGER: DATE
N O-CD-55958-1



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Hampton Roads, VA

LANDFILL - DRAINAGE AREAS & OUTFALLS
CELCO NARROWS PLANT
NARROWS, VIRGINIA

REVISIONS
011404B
REVISIONS PER DEQ

DESIGNED BY:
DRAWN BY: SAE/JFF
CHECKED BY: CSM
SCALE: 1" = 250'
DATE: DECEMBER 19, 2007
PROJECT NUMBER: B07153-01
4
OF

REV NO	GRD	WO OR EST NO	REVISIONS	DRWN	CHKD	APPVD	APPVD	APPVD	APPVD	DATE

DWG NO | REFERENCE DRAWINGS

Celanese Acetate
CELCO PLANT
NARROWS, VIRGINIA

RFA/WO		SCALE 1"=250'	PLANT GEN.
DRWN DAA	DATE 12/19/07	PLOT SCALE 1=1	GEN.
CHKD	DATE	APPVD	DATE
APPVD	DATE	APPVD	DATE
APPVD	DATE	APPVD	DATE

PLOT PLANS
LANDFILL - DRAINAGE AREAS & OUTFALLS
STORMWATER POLLUTION PREVENTION PLAN

ESC MANAGER DATE
N 26A-355959

Appendix G
List of Materials Potentially Exposed to Storm Water Runoff

Appendix G-1
List of Pesticides/Herbicides
Celanese Acetate, LLC, Narrows, Virginia

Product Name	Description	Manner & Frequency of Application
Talstar® Professional Insecticide	Insecticide	Used inside buildings and outside to control spiders. Not to be used anywhere outdoors that could drain to a storm drain. Applied with sprayer as needed.
Prescription Treatment® brand ULD® BP-300 Contact Insecticide Formula 1	Insecticide	Fogger used only inside the Tin Shop. Applied using fogging machine as needed for flies, spiders.
Mother Earth D Pest Control Dust	Insecticide	Applied by hand or power duster as needed. To control various crawling insects.
DuPont Advion Cockraoch Gel Bait	Insecticide	Applied to cracks & crevices in areas of roach activity, as needed. For indoor use only.
JetStream Water-based Contact Insecticide	Insecticide	Applied as a fogging agent indoors only to control flies and spiders.
Kicker®	Insecticide	Applied inside or outside using a sprayer or fogger to control spiders, fleas.
DuPont Advion Ant Gel bait	Insecticide	Applied in cracks & crevices in areas of ant activity, as needed.
Prentox® ExciteR ™	Insecticide	Applied inside or outside using a sprayer or fogger to control spiders, fleas.
Generation ™ Blue Max Mini Blocks	Rodenticide	For exterior use. Inside tamper resistant bait station. Left in place as needed. Kept away from storm drains.
Zoecon Gentrol® IGR Concentrate	Insecticide	Applied with sprayer to control fleas. Kept away from storm drains
MAXFORCE® FC Professional Insect Conrol® Ant Killer Bait Gel	Insecticide	Applied in cracks & crevices in areas of ant activity, as needed. Kept away from storm drains
Prescription Treatment® brand Avert® Cockroach Gel Bait Formula 3	Insecticide	Applied to cracks & crevices in areas of roach activity, as needed. For indoor use only. Kept away from storm drains
Prescription Treatment® brand ADVANCE™ Cockroach Gel Bait Reservoir	Insecticide	Applied to cracks & crevices in areas of roach activity, as needed. For indoor use only. Kept away from storm drains
MAXFORCE® Professional Insect Control® Fine Granule Insect Bait	Insecticide	Applied to sticky traps as an attractant on building exteriors where ants are foraging. Kept away from storm drains
MAXFORCE® Professional Insect Control® Ant Bait Stations	Insecticide	Used inside buildings. Closed stations.
Prescription Treatment® brand WASP-FREEZE® Wast & Hornet Killer Formula 1	Insecticide	Aerosol can used to treat bees nests. Use as needed. Kept away from storm drains.
Prescription Treatment® brand 565 PLUS XLO® Formula 2	Insecticide	Aerosol can to be used as a crack and crevice treatment for roaches. Kept away from storm drains
Prescription Treatment® brand ULD® BP-100 Contact Insecticide Formula 1	Insecticide	ULD fogger used inside or outside near furnaces (only when no wind). Use as needed for spiders.

Appendix G-1
List of Pesticides/Herbicides
Celanese Acetate, LLC, Narrows, Virginia

Product Name	Description	Manner & Frequency of Application
Phantom® Insecticide	Insecticide	Air sprayer to treat for roaches and ants, as needed. Kept away from storm drains
Prescription Treatment® branch Cy-Kick® CS Pressurized Crack & Crevice Residual	Insecticide	Applied using an air sprayer to various insects. Used both Indoors and outdoors, as needed. Kept away from storm drains
Crossbow* Herbicide	Herbicide	Woody plants, saplings control on RR tracks, along bank at front entrance, & some fencelines. Diluted with water & sprayed usually 2 times per year. Approximately 42 gallons in total applied per year.
Imitator Plus	Herbicide	Used in various locations around the plant for weed control such as the perimeter fence, graveled/ rip rap banks, graveled areas; coal berm, RR tracks, etc. Diluted with water & sprayed usually 3 times per year. Approximately 120 gallons in total applied per year

Appendix H
List of Significant Spills and Leaks

Appendix H-1
List of Significant Leaks and Spills[1]
Celanese Acetate, LLC, Narrows, Virginia

Date	Location	Description
8/16/2009	WWTP	A 2-inch potable water line leaked 10 gallons per minute (gpm) of potable water containing chlorine (0.09 ppm) into the WWTP clear well and to Outfall 003.
8/22/2009	CA	Less than 1 lb/hour of CA flake was visually detected in the cooling water ditch (Outfall001). The source could not conclusively be determined.
9/9/2009 & 9/10/2009	CA	Less than 1 lb/hour of CA flake was visually detected in the cooling water ditch (Outfall001) due to breaches discovered in the Dept. 9 chemical sewer line and the nearby storm sewer.
12/9/2009	Landfill	About 1,500 gallons of combined landfill leachate and storm water were released from the Phase I landfill and flowed to the New River.
1/25/2010	Landfill	About 114,000 gallons of combined landfill leachate and storm water overflowed the landfill leachate tank and flowed to the New River.
1/26/2010	Landfill	About 496,000 gallons of combined landfill leachate and storm water were released from a break in the landfill leachate piping, which emptied the leachate tank. The release flowed to the New River.
1/29/2010	Landfill	About 32,000 gallons of landfill leachate were released from a break in the landfill leachate piping. The release flowed to the New River.
2/22/2010	Plant General	An intermittent oil sheen, identified as lubricating oil, was released via the once-through cooling water to Outfall 001 and the New River. Quantity released was estimated at 1.4 gallons.
2/28/2010	ARAM	About 108 lbs of isopropyl acetate and 46 lbs of methyl ethyl ketone were released to once-through cooling water and to Outfall 001, due to a tube leak on a process condenser.
3/8/2010	ARAM	About 105 lbs of isopropyl acetate and 45 lbs of methyl ethyl ketone were released to once-through cooling water and to Outfall 001, due to a tube leak on a process condenser.
3/13/2010	Landfill	Approximately 400 gallons of landfill leachate were released to the New River, when a leachate collection reservoir overflowed during a high rain event.
4/29/2010	Plant General	Approximately 300 gallons of wastewater overflowed the chemical sewer and were released to a storm sewer.
6/30/2010	WWTP	Approximately 10 gallons of wastewater from the Equipment Building was released to the storm sewer.
9/23/2010	Plant General	Approximately 100 gallons of wastewater overflowed the chemical sewer and was released to a storm sewer.
3/26/2011	Plant General	Approximately 1 gallon of diesel fuel from a leaking man lift was released to a storm sewer.
4/4/2011	ARAM	Approximately 1,300 pounds of acetic acid were released to the New River via a breach between the process chemical sewer and the storm sewer.

Appendix H-1
List of Significant Leaks and Spills[1]
Celanese Acetate, LLC, Narrows, Virginia

Date	Location	Description
6/06/2011	Plant General	Approximately 150 gallons of water from an ash sluice line break flowed into a storm drain and to Outfall 001. The ash had settled by the time it reached the drain so it was mainly water. This material normally is discharged to the ash settling ponds, which discharges via Utilities Outfall 001.
4/26/2012	Utilities	An inadvertent release of less than 5 gallons of fire-fighting foam flowed into storm sewer to the New River and resulted in visible foam from Outfall 001 to the New River.
7/27/2012	Plant General	Ash sluice water from an underground line break reached the cooling water ditch/Outfall 001, causing turbidity in this outfall.
9/18/2012	Landfill	Approximately 100 pounds of ash from the ash landfill reached the New River via Outfall 005. The material was washed during a heavy rain due erosion of a recently seeded area and failure of a storm water conveyance ditch.

[1]List only includes spills from August 2009 – September 2012.

Appendix I
Public Notice Billing Form

PUBLIC NOTICE BILLING INFORMATION FORM

I hereby authorize the Department of Environmental Quality to have the cost of publishing a public notice billed to the Agent/Department shown below. The public notice will be published once a week for two consecutive weeks in accordance with 9 VAC 25-31-290.C.2:

Agent/Department to be billed: Ken Hausle

Owner: Celanese Acetate, LLC

Applicant's Address: 3520 Virginia Avenue
Narrows, Virginia, 24124

Agent's Telephone No: 540-921-6235

Authorizing Agent: Ken Hausle
Signature

Ken Hausle
Printed Name

Senior Environmental Engineer
Title

Facility Name: Celco Facility

Permit No. VA0000299

Please return to: **Lewis Pillis**
Department of Environmental Quality
3019 Peters Creek Road
Roanoke, VA 24019

Appendix J
Laboratory Reports

See enclosed CD.

Appendix K
List of Potential Cooling Tower Additives

Appendix K-1
List of Potential Cooling Tower Additives
Celanese Acetate, LLC, Narrows, Virginia

Product Name	Application Point	Description	Schedule of Additive Usage	Approximate Concentration in Blowdown, ppm
GE Continuum AEC 3136[1]	Celanese HVAC Towers 1, 2, 4 (for HVAC, Solvent Recovery, Air Compressors)	Water Based Corrosion Inhibitor/Deposit Control Agent	As needed to maintain levels	<100 ppm as product
ChemTreat CL 4898	HVAC Towers 5, 6 (for HVAC, Solvent Recovery, Air Compressors); CA Cottonhouse Humidity Control Tower (currently OOS); Ketene Cooling Tower; WWTP Cooling Tower	Water Based Corrosion Inhibitor/Deposit Control Agent	As needed to maintain levels	<100 ppm as product
GE Spectrus NX1100/1103[1]	Celanese HVAC Towers 1, 4; WWTP Cooling Tower	Biocide	Daily or monthly, or as needed	50 ppm
ChemTreat CL 2156	HVAC Towers 5, 6; Ketene Cooling Tower	Non-Oxidizing Biocide, Isothiazolin (1.15,0.35%)	1 - 3 times per week	<100 ppm when dosed
Chemtreat CL 40/41	Celanese HVAC Towers 4, 5, 6; Ketene cooling tower	Oxidizing Biocide Activator, 40% Sodium Bromide	Continuous	0.15-0.25 ppm as residual bromine
FO 623	All Celanese Cooling Towers as Needed	Anitfoaming Agent	As needed to prevent foaming	<50 ppm as product
Crown Hydrex 2212 (formerly named CG505)	CCR Towers - Noncontact Cooling Water	Yellow Metal Corrosion Inhibitor, Tolytriazole	Continuous	<100 ppm as product
Crown Hydrex 2253 (formerly named CLG-9)	CCR Towers - Noncontact Cooling Water	Corrosion and Scale Inhibitor	Continuous	<100 ppm as product
Crown Hydrex 2973 (formerly named Defoam S)	CCR Towers - Noncontact Cooling Water	Silicone Antifoam	1 - 3 Times Per Week as Needed	<50 ppm when dosed
Crown Hydrex 2252 (formerly named DTEA II)	CCR Towers - Noncontact Cooling Water	Organic Dispersant	1 - 3 Times Per Week as Needed	<100 ppm when dosed
Bleach	All Celanese Towers - Noncontact Cooling Water	Oxidizing Biocide, 12.5-15% NaOCl	3 Times per day to continuous	0.5-1.0 ppm as residual chlorine

[1] Purchase of GE Products was discontinued; however, these products will continue to be used until all remaining stock is consumed.

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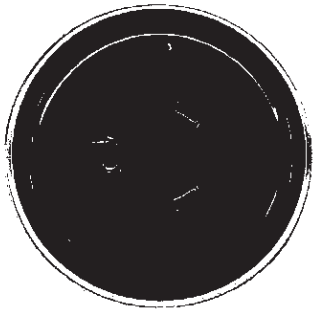
Final Report

VPDES Permit VA 0000299
Renewal and Modification Application
Appendix J



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December 2012